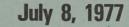
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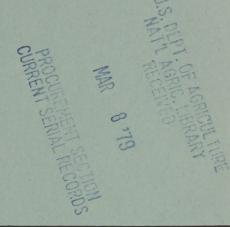
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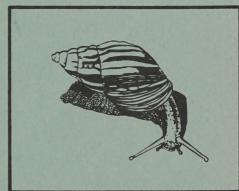
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Cooperative PLANT PEST REPORT











Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE

This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

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2(27):479-502

# **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

# Current Conditions

CORN LEAF APHID 50 or more per sorghum plant in parts of southern Oklahoma. Still heavy on sorghum in eastern Nebraska. (p. 481-482).

Controls applied for GREENBUG in parts of southeastern New Mexico and northwestern Texas. Averages near 50 per plant on sorghum in parts of southeastern Nebraska and on small grains in east-central North Dakota. (p. 482).

POTATO LEAFHOPPER averages of 1+ per sweep of alfalfa in parts of central Missouri, central Kentucky, 3 counties across Ohio, and parts of west-central, southwestern, and southeastern Wisconsin. (p. 482-483).

Adults of EUROPEAN CORN BORER emerged in Kansas and Maryland. Pupation of first generation in Nebraska, Illinois, Kentucky, and Michigan. (p. 483). First economic infestation of wheat in New York. (p. 485).

CORN ROOTWORM adults 4 or more per corn plant in parts of south-western and northeastern Missouri, central Illinois, and north-western Indiana. (p. 483-484).

WHEAT STRIPE RUST severe on wheat in western Washington and Oregon. (p. 485).

VARIEGATED CUTWORM 100+ per blacklight trap night in parts of west-central Indiana and east-central Nebraska. (p. 501).

# Detection



New WEEVIL for the Western Hemisphere in Illinois. (p. 490).

For new county records see page 500.

New host records for 3 ARMORED SCALES, 2 SOFT SCALES, and a WHITEFLY in Florida. (p. 492).

Reports in this issue are for the week ending July 1 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### DISEASES

CURLY TOP VIRUS - CALIFORNIA - Monterey County--damage up to 38% in tomatoes and 22% in sugar beets in southern Salinas Valley. Moderately heavy numbers of BEET LEAFHOPPER (Circulifer tenellus) on weeds in fallow fields and pastureland pose threat of additional CURLY TOP VIRUS infection in this area. Over 2,800 acres and over 500 miles of roadside treated. (Hawkins).

# INSECTS

ARMYWORM (Pseudaletia unipuncta) - NORTH DAKOTA - Larvae per sq ft by county: Traill--up to 2 (averaged 1.5) in 2 oat and wheat fields, Steele--up to 4 (averaged 2) in 1 barley field. Larvae 0.25-1 inch long. (LeClerc, Scholl). WISCONSIN - Marathon County--larvae heavy in part of western area. Larvae, mostly 0.5 inch long, averaged 4 per sq ft in field of lodged oats. Also heavy in other fields in area. Armyworms light and parasitism heavy in oats in other areas of State. Appeared on corn in Marathon County, about 75% of plants in outside rows infested. (Lovett).

BEET LEAFHOPPER (Circulifer tenellus) - See CURLY TOP VIRUS above.

CORN EARWORM (Heliothis zea) - FLORIDA - St. Johns County--main pest, some FALL ARMYWORM (Spodoptera frugiperda), of field corn ears in 6 fields at Hastings. Damage extended I inch or more down the tips on 70% of ears. (Copeland). SOUTH CAROLINA - Bamberg County--H. zea larvae heavy, 15-20 per ft of row in 50-100 acres of young soybeans June 24. (McAlhany). MARYLAND - Statewide-- unseasonably light on corn with very few larvae feeding on corn tassels. Blacklight trap catches averaged less than 1 per night at all sites. (Hellman, Pinto). ALABAMA - Houston County--infested 95-100% of all ears of corn in 5 maturing fields. Damage heavy. (McQueen).

OKLAHOMA - Corn earworm counts by county: Caddo--infested average of 100% of corn ears, Muskogee--50% of ears, and Marshall--large larvae fewer than 1 per 5 row ft on peanuts. (Arnold). NEBRASKA - Moderate on corn in southeast district, plants with damage to upper leaves and tassels by county: Richardson--40% and Pawnee--20%. (Miller).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averages per sorghum plant by county: Bryan-95 (ranged 20-120) on boot stage, McCurtain-50, Texas-heavy in 1 field at Goodwell. Goodwell field will be treated. (Arnold). KANSAS - Ellis County-heavy in whorls of 2 to 3-ft sorghum and increased on seedlings. (Harvey). NEBRASKA - Eastern half of State-continued heavy on sorghum. No significant damage. (Raun et al.).

MISSOURI - Central and north-central areas--corn leaf aphid infested 12-81% (averaged 37%) of sorghum plants. (Munson). ILLINOIS - Northern two-thirds of State--winged adults and few nymphs appeared in many corn fields. Central district--infestations averaged 28 percent with fewer than 20 aphids per whorl on late whorl corn in survey of 65 fields in 7 counties. (Black). WISCONSIN - Statewide

on corn. Crawford County--corn leaf aphid generally light but up to 500+ on about 25% of plants in 1 field with dry silks. Some plants stunted due to very heavy populations almost covering plants. (Lovett).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Curry, Roosevelt, and Chaves Counties--light and scattered on sorghum. Some controls in Chaves County. (Staff). TEXAS - Maximum counts per row ft of sorghum by county June 18-22: Hill, Johnson, Ellis, and Navarro-increased; Crosby--small colonies in scattered fields, increased; Castro and Lamb--increased in some fields, mean up to 50 per plant with light spotting; Deaf Smith--5 on plants 6-14 inches tall; Castro 1 on 6-12 inches; Oldham 50 on 14-20 inches; Randall 1 on 3-10 inches; Potter 5 on 6-12; Briscoe 5 on 3-10 inches; Floyd 20 on 6-10 inches; Hale 5 on 6-12 inches; Hutchinson 1 on 3-10 inches; Hansford 10 on 8-14 inches; Sherman 20 on 8-16 inches; and Moore 25 on 5-16 inches. (Daniels et al.). OKLAHOMA - Bryan County-averaged 25 per plant on headed sorghum checked. Bryan (second field at boot stage), McCurtain, and Texas Counties--very light. (Arnold).

MISSOURI - Central and north-central areas--greenbug infested 0-53% (averaged 32%) of sorghum plants. Aphids 2.5-10.4 (averaged 6.4) per infested plant. (Munson). KANSAS - Ellis County-increased up to 100 (averaged 10) per 2 to 3-ft sorghum plant, no winged specimens. (Harvey). NEBRASKA - Southeastern area--notice-able on sorghum but still far below damaging levels. Richardson and Pawnee Counties--17.7-114.25 (averaged 47.4) per plant in 5 sorghum fields. Winged forms in all fields. Plants 17-54 inches extended leaf height. Damage confined to localized reddening of leaf tissue. (Miller). York County--averaged 45 per plant (up to 800+ on some plants) in 1 sorghum field. (Raun, Monke).

NORTH DAKOTA - Percent small grain fields infested (and greenbug per linear row ft) by county: Traill--87% of 23 fields (69), Cass--88% of 8 fields (15), Steele--100% of 5 fields (69). Greenbug 90+% of aphids detected in Cass and Traill Counties, but Rhopalosiphum padi dominant in Steele County. Winged and wingless adults and nymphs detected. Grain from boot to headed (soft dough) with majority of fields headed out. Controls applied in parts of Cass, Traill, and eastern Steele Counties. (Woods et al.).

POTATO LEAFHOPPER (Empoasca fabae) - MISSOURI - Central area--3-60 (averaged 16) per sweep of alfalfa and 0-28 (averaged 11) per sweep of red clover. (Munson). KENTUCKY - Adult ranges (and averages) per sweep by county: Larue 0.71-1.64 (1.5) in 5 uncut alfalfa fields 24.3 inches tall June 23 and 25, and Lincoln 0.69-1.32 (1.08) in 6 uncut fields 19.4 inches tall June 23. (Christensen et al.). OHIO - Still economic on alfalfa; counts per sweep by county: Wayne 3.1, Greene 1.3, Fayette 2.1, and Clinton 0.8. Alfalfa averaged 19 inches and flowering. Many second cuttings completed. Fayette County--all stages on soybeans, nymphs 1-4 on underside of each leaf. (Drees). VIRGINIA - Isle of Wight County--damage to peanuts severe in 1977. (Allen).

NEW YORK - Central and western areas--potato leafhopper activity on alfalfa became apparent. Finger Lakes and northwestern regions--fewer than 1 adult per sweep in most forage fields. (Smith, Herendeen). WISCONSIN - Counts per sweep of second growth alfalfa in Spring Green area--5-15 (heavy); Eau Claire, Chippewa, Clark, Dunn, and Washington Counties--0.5-1.5; Dane, Dodge, Grant, Marathon, and Portage Counties--0.5-3. Counts on vegetables: Spring Green and Central Sands areas--0-3 per 25 sweeps (decreased) of potatoes, 0-2 per 25 sweeps of snap beans in Central Sands; Dunn and Eau Claire Counties--0-35 per 50 sweeps of snap and kidney beans. (Lovett).

TOBACCO HORNWORM (Manduca sexta) - MARYLAND - Infested less than 1% of tobacco plants in all tobacco counties. (Hellman, Pinto).

TOMATO HORNWORM (Manduca quinquemaculata) - OKLAHOMA - Custer County--still heavy on commercial tomatoes. Wagoner County-averaged 1 per plant in some gardens. (Arnold).

# CORN, SORGHUM, SUGARCANE

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Eastern and south-central areas--emergence of first generation adults underway. Barton, Pawnee, Stafford, Kiowa, and Pratt Counties--pupation well underway on 5-ft to silking corn. (Brooks et al.). NEBRASKA - Southeast district--first generation pupation underway June 26. (Miller). ILLINOIS - Marion and Franklin Counties--occasional first generation pupae. (Black). KENTUCKY - First generation larvae near full growth and generally found boring in cornstalks or at base of leaf sheath. First pupa in Warren County field. Corn from early whorl to silking stage. Percent of plants damaged by county: Marion 26 in 5 fields, Warren 5 in 4, and Madison 4 in 2. (Sloderbeck). MICHIGAN - First adult flight soon. Second generation may be early this year. (Wells).

MARYLAND - Statewide--European corn borer feeding injury much below normal seasonal levels. First flights of second generation in lower Eastern Shore counties. (Hellman, Pinto). NEW YORK - Larvae active in field corn by county: Niagara--June 23 (Herendeen), Genesee--June 27 (Cummings), and Seneca--June 24 (Willson).

BLACK CUTWORM (Agrotis ipsilon) - WISCONSIN - Dane County--reduced 20 and 60% of stands in  $\overline{2}$  late-planted sweet corn fields in western area. Damage 1-2 inches below soil surface. (Lovett).

CORN ROOTWORMS (Diabrotica spp.) - KANSAS - WESTERN CORN ROOTWORM (D. virgifera): Barton County--damage to roots moderate in corn field (Brooks), Pratt County--some silk damage in early silk corn (Bell), Comanche County--adults 0.35 per plant in untreated corn field (Salsbury). NEBRASKA - Dawson, Hill, Buffalo, and Saunders Counties--first Diabrotica virgifera adults of year June 24-28. (Raun, Monke). MISSOURI - D. virgifera counts per corn plant by area: Central--larvae 0.2-9.4 (averaged 4) and adults 0-3.7, north-central--larvae 1.0-5.4 (averaged 1.3) and adults 0-3.7, southwestern--adults 1-7 (averaged 1.5), north-eastern area--2-5 D. virgifera adults in some fields but 2-5 NORTHERN CORN ROOTWORM (D. longicornis) in other fields. (Munson). KENTUCKY - Warren County--first D. longicornis adults of season June 19. Light; no silk feeding. (Sloderbeck).

ILLINOIS - Northern two-thirds of State--D. virgifera and D. longicornis adults throughout this area. Central area--up to 4 per corn plant in occasional fields. Emergence should peak in early to mid-July, but beetles will be present next 60 days. (Moore et al.). WISCONSIN - Grant County--first D. virgifera of season in corn June 29. Large larvae and pupae heavy. Columbia County--severe lodging in untreated area after rain June 29 near Arlington. (Lovett). INDIANA - D. virgifera: Porter County-adults heavy, averaged 4 per cornstalk in some fields; Vigo County north to Lake County--mating noted. Most corn not yet in tassel stage. Leaf feeding common in some fields. (Leva, Meyer). OHIO - All 3 larval instars and D. longicornis in continuous corn field. First adults expected in 14 days. (Szatmari-Goodman). MICHIGAN - Cass County -- D. virgifera found June 27 (Hammon), a record early appearance which could indicate adult problems on corn silks later in season (Ruppel). St. Joseph County--first D. longicornis for year, June 29. (Hammon).

CHINCH BUG (Blissus leucopterus leucopterus) - MISSOURI - West-central, northeast, and north-central areas--up to 40 per plant, on scattered corn and sorghum from small grains. (Munson). NEBRASKA - Richardson, Gage, Pawnee, Johnson, Nemaha, Otoe, Jefferson, Saline, and Saunders Counties--adults and nymphs continued move into corn and sorghum adjoining small grains. Stand losses up to 100% with more stand loss when fields replanted. Up to 1,100+ (averaged about 350) per plant in Johnson County sorghum field. (Peters et al.).

#### SMALL GRAINS

Winter wheat harvest for June 1-14 in full swing in southern Kansas and commencing in central Kansas in June. Harvest about 7 days ahead of normal there, while in Oklahoma and Texas the harvest is 3-4 days behind normal. In the upper Midwest small grains continuing to develop 14 days ahead of normal. In most of the upper Midwest, surface moisture better than in 1976, but subsoil moisture is minimal. Weeds still major problem. Condition of spring small grains is average. Wheat harvest for June 15-28 in Oklahoma, Texas, and Kansas ahead of 1976 and normal. In southern Nebraska the wheat harvest started 10 days ahead of normal, yields in Kansas and Nebraska are generally good. Throughout the Dakotas, Montana, and Minnesota, the small grains are in good condition and ripening in some areas. In most of the upper Midwest, topsoil moisture adequate and subsoil moisture improving. (Roelfs, Long).

# DISEASES

WHEAT LEAF RUST (Puccinia recondita) severities of 30-40% on some winter wheats in  $\overline{\rm KANSAS}$  June 1-14, but rust appeared too late to cause significant losses. (Eversmeyer). Severities in MISSOURI somewhat less. Traces first found on Baart, June 1 at experiment stations at Waseca, Lamberton, and Rosemount, MINNESOTA. Severities on June 7, trace to 5% in winter wheat plots at Rosemount and 1% on Baart at Waseca and Lamberton. Trace on winter wheat at Fargo, NORTH DAKOTA, June 6. (Statler, Miller). On rye, traces observed in Minnesota fields June 1-14. (Roelfs, Long).

Wheat leaf rust amounts light on commercial wheat in Minnesota, the DAKOTAS, VIRGINIA, WASHINGTON, and WISCONSIN. In NEBRASKA, leaf rust developed on remaining green leaves of winter wheat, but crop damage minimal due to earliness of the wheat. In nurseries, leaf rust severities up to 60% in southern Nebraska while 40% occurred in southern Minnesota. On rye, traces observed in Minnesota, Virginia, and Wisconsin fields. (Roelfs, Long).

WHEAT STRIPE RUST (Puccinia striiformis) severe on wheat in western WASHINGTON and OREGON where moisture adequate but rust lighter than in 1975 in eastern Washington June 15-28. The 1977 stripe rust cultures from TEXAS differ from those normally occurring in Pacific Northwest. (Line).

OAT CROWN RUST (Puccinia coronata) traces in KANSAS, IOWA, PENNSYLVANIA, and MINNESOTA June 1-14. A 1-2% yield loss predicted in Glenn County, CALIFORNIA, commercial field. (Prato). Severities June 15-28 light in Iowa, Kansas, Minnesota, SOUTH CAROLINA, VIRGINIA, and WISCONSIN fields. Losses will be minimal due to earliness of oat crop. (Roelfs, Long).

BARLEY LEAF RUST (<u>Puccinia hordei</u>) traces common on commercial barleys as far north as northern MINNESOTA and severities light in VIRGINIA June 15-28. (Roelfs, Long).

OAT LOOSE SMUT (Ustilago avenae) severe in oats with 20% loss in some fields in southwestern MINNESOTA June 15-28. (Roelfs, Long).

LOOSE SMUT (Ustilago nuda) on trace to 1% of barley and wheat throughout MINNESOTA and SOUTH DAKOTA June 15-28. (Roelfs, Long).

TAKE-ALL (Gaumannomyces graminis) - WISCONSIN - Infected 33 of 70 winter wheat fields; greatest prevalence, 17% in 1 Kenosha County field. (Lovett).

WHEAT POWDERY MILDEW (Erysiphe graminis f. sp. tritici) - WISCONSIN - Infected 28 of 70 winter wheat fields. Greatest prevalence, 86% in 1 Sheboygan County field. (Lovett).

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW YORK - Seneca County--larvae collected from wheat June 17. Infested stems represented less than 1% of stand, but affected plants very apparent due to white heads caused by total severance of stem. Livingston County--found June 28. Infested 44% of 100 stems in 1 late-planted winter wheat field, Ticonderoga variety, and 5% of second field in northern area June 28. First economic infestation for wheat in State; isolated cases of larvae in wheat reported in 1976. (Willson).

#### TURF, PASTURES, RANGELAND

#### INSECTS

A SCARAB (Ataenius spretulus) - OHIO - Clermont County--all stages still present and teneral adults from first generation appeared June 20. (Wegner). MARYLAND - Montgomery and Prince Georges

Counties-A. spretulus larvae 6-10 per sq ft, light, in 30 acres of turf in 3 golf courses. Population well below record high of 1975. (Hellman, Pinto).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - Fresno County--adults and nymphs 30-50 per sq yd, heavy, on St. Augustine-grass at Sanger. (Dunnegan).

#### **FORAGE LEGUMES**

# INSECTS

ALFALFA WEEVIL (Hypera postica) - NEVADA - Eureka County--larvae averaged 8 per sweep on 300+ acres of hay alfalfa at Beowawe. (Peters). OKLAHOMA - Washita and Caddo Counties--light, up to 2.5 adults and 4 larvae per 10 sweeps of alfalfa. (Arnold).

CLOVER ROOT CURCULIO (Sitona hispidulus) - KENTUCKY - Adult emergence nearly completed for season. Adult averages per sq ft in Fayette County--10.2 in red clover field and 14.5 in alfalfa field. (Leibee).

ALFALFA BLOTCH LEAFMINER (Agromyza frontella) - PENNSYLVANIA - Juniata County--larvae and adults very heavy on alfalfa at Mifflin June 21. Adult damage 100%. Mines in 10% of leaves. Larvae and adults heavy on alfalfa at East Waterford June 22. (Settlemyer). Centre County--50 eggs (ranged 22-95) per stem of alfalfa June 23. Ten mines per stem resulted in 10% damage on alfalfa. (Byers). NEW YORK - Seneca County--pinholing in alfalfa by second generation heavy June 24-28. Mines and blotches appearing on second growth. (Willson).

GREEN CLOVERWORM (Plathypena scabra) - KENTUCKY - Larvae continued to increase on alfalfa and red clover. Larval averages per 20 sweeps in Fayette County--7.4 in alfalfa field and 3.9 in red clover field. (Yeargan). INDIANA - South-central and southwest districts--all larval sizes averaged 6 per 10 sweeps of alfalfa in 42 fields. (Sutton). Benton County--damaged soybeans. (Matthew). West-central district--averaged less than 3 per sweep of soybeans. (Meyer).

ALFALFA CATERPILLAR (Colias eurytheme) - CALIFORNIA - Fresno County--heavy on alfa $\overline{lfa}$  at  $\overline{Clovis}$ . Fourth instar to full grown larvae 10 per sweep. (Dunnegan).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Washita and Caddo Counties--50-60 per 10 sweeps of alfalfa. (Arnold).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Counts per sweep of seed alfalfa by county: Pershing--6-55 at Lovelock, spotty but increased rapidly past 10 days (Lauderdale, Munk); Humboldt--2-3 (averaged 12) at Jungo (Stitt), and averaged less than 1 at Orovada (Lauderdale); Eureka--averaged 8 per sweep on 300+ acres of hay alfalfa at Beowawe (Peters). WISCONSIN - Spring Green areaup to 75 per sweep of alfalfa. (Lovett).

#### SOYBEANS

# INSECTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Jackson County--damage continued light to severe on soybeans throughout county, about 200 acres treated. (Linker). ALABAMA - South and central areas--still major problem in thousands of acres of soybeans 5-20 inches tall. (Henderson et al.).

BEET ARMYWORM (Spodoptera exigua) - ALABAMA - Geneva County-heavy and damaging to soybeans in several fields. (Reynolds).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - KENTUCKY - Marshall County--lodged 15-20% of soybeans in 50-acre field. (Raney).

GRASSHOPPERS - KENTUCKY - Graves County--nymphs 10-15 per sq ft, damaged 25 acres of 4-inch, no-till soybeans; controls applied. (Green).

#### **PEANUTS**

# INSECTS

BEET ARMYWORM (Spodoptera exigua) - FLORIDA - Jackson County-started to become problem on peanuts, small larvae fed on new leaves before leaves unfold. Part of leaves dying and plant growth slowed. Control may be difficult. (Linker).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Marshall County--infested 20-30% of peanut terminals. (Arnold).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - First of season. Marshal $\overline{1~\text{County--inf}}$  ested 1-2% of peanut plants June 24. (Arnold).

#### COTTON

#### INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts per 100 cotton plants, unless otherwise indicated, by county June 18-24: Cameron--0-32 adults, 0-34 punctured squares, heavy feeding at Santa Rosa, Harlingen, and La Feria; Hidalgo--0-14 punctured squares, heavy feeding at Monte Alto and Hargill; Willacy--0-4 punctured squares, heavy feeding at La Sara; Kleberg--0-35% damaged squares; Nueces and Refugio--0-40% damaged squares; San Patricio--0-32% damaged squares; Williamson and Milam-most damage near woods, 2-50% damaged squares in "hotspots", less than 5% damaged squares in all fields; Hill and Johnson--adults present; Ellis and Navarro--punctured squares less than 2% in most fields but 7% in few fields at Frost and Maypearl; Kent--4% damaged squares; Fisher and Jones--light to moderate in older fields; Mitchell and Scurry--light in fields, 6.1 per trap per week; Glasscock--0-31 per trap per week in St. Lawrence Valley; Howard 0-5 in 1 field at Sand Springs, 4 per trap per week. (Cock et al.). South-central area--second generation light but increased; Caprock area--1.adult June 28. (Cole, Byrd).

OKLAHOMA - Boll weevil adults in pheromone traps by county:
Harmon--11 in 24 traps, Jackson--37 in 16, Kiowa--15 in 37, and
Washita and Caddo--24 in 35. Punctured squares averaged 20% in 1
early planted cotton field in Caddo County. (Arnold).
MISSISSIPPI - Slight increase, still light on cotton. Adults by
county: Madison--3 in 24 traps, Lowndes--6 in 4, Franklin--3 in
1, Calhoun--4 in 2, Webster--4 in 2, Monroe--1 in 2, and Hinds-2 in 2. (Anderson). ALABAMA - Statewide--still very light throughout 80+% of the 450,000 cotton acres. Marengo County--square
damage increased to 35% in few fields, probably due to feeding
and egg laying by first field generation this season. (Yates et
al.).

BOLLWORMS (Heliothis spp.) - TEXAS - Counts per 100 cotton plants by county June 17-24: Cameron--0-21 eggs, 2-23 larvae, 0-21 damaged squares, heavy at Brownsville, Rio Hondo, and Harlingen; Hidalgo-0-18 eggs, 0-24 larvae, 0-36 damaged squares, heavy at Alamo, Progresso, Mission, and Weslaco; Willacy--heavy east of Lyford; Starr--ratio of 54 H. virescens to 46 H. zea; all lower Rio Grande Valley--80-100% H. virescens; San Patricio--ratio of 2 H. virescens to 1 H. zea, 0-4 eggs, 0-24 larvae, 0-21 damaged squares; Nueces--ratio of 9 H. virescens to 1 H. zea; 0-7 eggs, 0-9 larvae, 0-12% damaged squares; Refugio--0-5 eggs, 0-2 larvae, 0-2% damaged squares; Williamson and Milam--0-2 eggs per 100 terminals, few larvae; Hill and Johnson--egg laying increased, larvae light to heavy; Ellis and Navarro--24% eggs in few fields, 30% larvae in 1 field near Ferris; Blacklands area--15-20% square loss in some fields; Castro and Lamb--0-2 H. zea per trap per night; Hale--increased, 0-14 per trap per night; Reeves--0.5 H. virescens and 1-2 H. zea per trap per night south of Pecos.

Counts per trap per night by county June 28: Crosby and Floyd--0.5 H. zea, 1-2 H. virescens (decreased); South-central area--ratio of 50 H. virescens to 50 H. zea in some fields. (Robinson et al.).

OKLAHOMA - H. zea: Caddo County--4th and 5th instars ranged 8-10 per 100 terminals in 1 cotton field treated earlier; Tillman County--occasional egg and 1 larva in early field. Caddo County-first H. virescens larva of season in cotton. (Arnold).

MISSISTIPT - Heliothis spp. larval averages on cotton acreage by county: Madison 4% on 2,200 acres, Prentiss--8% on 75, Itawamba--8% on 1,500, Coahoma--6% on 1,000, Calhoun--5% on 5,500, Adams--10% on 200, Pontotoc--1% on 30, Prentiss--4% on 400, Quitman--1.5% on 2,000, Sharkey--2% on 500, Webster--3% on 192, Yalobusha--0.1% on 3,800, Sunflower--3% on 3,600, Monroe--2% on 5,000, Montgomery--3% on 1,500, and Noxubee-1% on 3,500. (Anderson). ALABAMA - Limestone County--Heliothis spp. generally light, 1-20 per 100 cotton terminals. Some controls applied. (Salter et al.).

SOUTH CAROLINA - H. zea infestations on cotton by county: Chester-7-10% in 180-acre field, and York--6% in 30-acre field. Sumter, Clarendon, Calhoun, Orangeburg, and Saluda Counties--H. virescens heavy, increased in cotton fields, hard to control, up to 90% of larvae in some fields. (Douglass, Johnson). TENNESSEE - Franklin and Lincoln Counties--Heliothis sp. damaged 1% of cotton squares checked June 24. No eggs. (Cagle).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - Counts per 100 cotton terminals, unless otherwise indicated, by county June 18-24: Refugio--very heavy; Hill and Johnson--22-115, damaged late-planted and replanted fields; Ellis and Navarro-increased, 2-64; Bell--up to 100; Comanche--heavy on squaring cotton; Schleicher and McCulloch--increased, 5-10; Fisher, Wichita, and Wilbarger--15-40 in third-grown squares; Jones and Kent--5-10 in third-grown squares; Mitchell and Scurry-moderate in most fields; Crosby--30 and 40% damaged squares in 2 fields; St. Lawrence Valley area--0-8 per 100 plants; Martin and Howard--up to 2 per 100 plants; El Paso--increased. South-central area--counts very heavy, damaged replanted and late-planted fields. (Boring et al.). OKLAHOMA - Counts per 100 cotton terminals by county: Harmon--40-80, several fields treated; Tillman--25-30; and Washita and Caddo--0-30. (Arnold).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - Increased in many areas on cotton, infestation 0-9% with occasional "hotspots" in most fields. Hinds County--infestation 30% on 75 acres; Coahoma County--25% on 1,000 acres. (Anderson). ALABAMA - Northern area--generally 10-20 adults and nymphs per 100 ft of row of cotton, few fields had 60 per 100 ft of row with some controls applied. (Freeman et al.).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSISSIPPI - Sunflower County--heavy on 60 acres of cotton. (Anderson).

# POTATOES, TOMATOES, PEPPERS

# DISEASES

ALTERNARIA EARLY BLIGHT (Alternaria solani) - WEST VIRGINIA - Kanawha County--first for season on tomatoes July 1. (Taylor).

# INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - VIRGINIA - Accomac and Northampton Counties--adults currently very heavy. Foliar damage extensive on potatoes. Peaked during June 22-29 at Painter. (Hofmaster). OHIO - Greene and Wayne Counties--all larval sizes on potatoes. Up to 40% of each plant completely defoliated in Wayne County. (Drees). MICHIGAN - First generation larvae to pupate soon. Some overwintered adults still present. Emergence of new adults may occur within 14 days. (Wells).

EUROPEAN CORN BORER (Ostrinia nubilalis) - WISCONSIN - Central Sands area and at Galloway, Marathon County--damage moderate to severe to potatoes. Severe on Norgold variety. (Lovett).

GREEN PEACH APHID (Myzus persicae) - VIRGINIA - Carroll County-very heavy in commercial tomato planting, thickly clustered on undersides of leaves throughout planting. (Allen). MICHIGAN - Berrien County--colonies of young nymphs on peppers. Winged forms in several areas. (Wells).

#### BEANS AND PEAS

#### INSECTS

PEA APHID (Acyrthosiphon pisum) - WISCONSIN - East-central and south-central areas-3-55 (averaged 25 in most fields) per sweep of late peas and peas near harvest. (Lovett).

#### COLE CROPS

#### INSECTS

A WEEVIL (Baris lepidii Germar) - ILLINOIS - New Western Hemisphere record. Madison County--larvae and adults collected on horseradish (Armoracia rusticana) at Collinsville by D. Sherrod on May 12, 1977. Adults determined by J. Bouseman, confirmed by D.M. Whitehead; larvae by D.M. Anderson. Pest of cruciferous crops in Europe. (Black).

CABBAGE LOOPER (Trichoplusia ni) - COLORADO - Larimer County-first larvae on cabbage at Ft. Collins. (Hantsbarger). MICHIGAN - Van Buren County--reported on cabbage (Hammon) at least 30 days earlier than normal (Wells).

#### **CUCURBITS**

#### INSECTS

SQUASH BUG (Anasa tristis) - OKLAHOMA - Wagoner and Muskogee Counties--up to  $100~{\rm per}$  plant on garden squash. (Arnold).

#### GENERAL VEGETABLES

# INSECTS

ASPARAGUS BEETLE (Crioceris asparagi) - MARYLAND - Adult activity on bush stage asparagus above normal this season. Wicomico County-with 8-15 per plant in 2 acres; controls applied. (Hellman, Pinto).

ASPARAGUS APHID (Brachycolus asparagi) - MARYLAND - New county record. Worcester County--heavy on backyard asparagus at Berlin, May 19, 1977. Collected by P.G. Bystrak. Determined by M.B. Stoetzel. (Hellman, Pinto).

#### **DECIDUOUS FRUITS AND NUTS**

### INSECTS

CODLING MOTH (Laspeyresia pomonella) - OKLAHOMA - Wagoner County-5 adults in 2 pheromone traps in apple orchard. (Arnold).
MICHIGAN - Southwestern area--second generation adult flight initiated last period. Mason and Oceana Counties--first adult flight indicated for June 27 to July 1. Due to rapid development of codling moth in 1977, major proportion of first generation larvae will be fully grown before critical photoperiod initiates diapause or dormancy, and adults will emerge this year. Potential for increase of second generation will be greater in 1977 than in any of past several years. (Brunner).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - OKLAHOMA - Counts by county: Wagoner--2 adults in 2 pheromone traps in peach orchard, and Comanche--larvae moderate to heavy in peaches. (Arnold).

FRUITTREE LEAFROLLER (<u>Archips argyrospilus</u>) - UTAH - Utah County-damaged cherries in some orchards, cherry damage uncommon in State. (Allred, Davis).

A GRACILLARIID MOTH (Lithocolletis crataegella) - NEW YORK - Chautauqua County--heavy on fruit trees June 20. Adults emerged from mines on smaller spring leaves; eggs on larger summer leaves. Averaged 13.9 eggs and 3.1 new mines per leaf. (Leeper). Columbia and Dutchess Counties--first brood adults emerged June 6 and emerged in heavy numbers up to June 24. (Ophardt).

APPLE MAGGOT (Rhagoletis pomonella) - MICHIGAN - Statewide--emerged as of June 30. First egg laying in early apples near Kalamazoo June 29. Unusually early emergence and early egg laying activity. (Brunner). NEW YORK - Columbia County--first adult trapped June 23 in abandoned orchard. (Ophardt). Western area of State--only 1 adult trapped June 24 along Ontario Lake ridge area. (Pease).

PEAR PSYLLA (Psylla pyricola) - UTAH - Utah County--eggs averaged 0.8 and nymphs 0.5 per leaf in pear orchard at Orem. (Davis).

TENT CATERPILLARS (<u>Malacosoma</u> spp.) - OREGON - Coos County-outbreak populations in river bottom lands of Coquille area during May and June. Most damage on willow, alder, and unsprayed fruit trees. Washington County--heavy populations that resulted in masses of defoliated trees have pupated and some adults in light traps. (Larson).

EUROPEAN RED MITE (<u>Panonychus ulmi</u>) - MISSOURI - Central area-0.2-7.3 (averaged 3.8) per leaf on apples week of June 25, and 0.2-5.0 (averaged 0.9) week of July 2. (Munson). OHIO - Fairfield County--sharply increased in apple orchards, averaged about 10 per leaf. On trees with good predatory mite populations, treatment should not be necessary. Bronzed leaves visible with averages of 30 or more <u>P. ulmi</u> per leaf. (Holdsworth). MICHIGAN - Heavy numbers of active stages with high proportion of eggs in apple orchards. Most miticides used in State affect active stages. (Brunner).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSOURI - Central area--3.4-79.6 (averaged 42) per leaf on apples week of June 25, and 6.8-109.0 (averaged 57.9) week of July 2. (Munson). MICHIGAN - Heavy in commercial apple orchards, mites moving into trees much earlier than normal due to unusually dry condition of cover crop. (Brunner).

FALL WEBWORM (<u>Hyphantria cunea</u>) - TEXAS - Counts on pecans by county June 18-24: Tom Green, Sterling, and Taylor--increased; Young--moderate to heavy; Upton and Crockett--light to moderate. (Wilson et al.). MISSISSIPPI - Oktibbeha County--larvae moderate on pecans, appeared to be increasing. (Neel).

WALNUT CATERPILLAR (<u>Datana integerrima</u>) - OKLAHOMA - First of season. Beckham, Custer, Caddo, and Washita Counties--heavy on pecan and walnut trees. (Arnold).

#### **ORNAMENTALS**

#### INSECTS

MINING SCALE (Howardia biclavis) - FLORIDA - New host records for State. Broward County--adults of this species and TERRAPIN SCALE (Lecanium nigrofasciatum) moderately infested stems of Acer barbatum (Florida maple) tree in park at Ft. Lauderdale, May 19. (O'Brien).

FLORID. WAX SCALE (<u>Ceroplastes floridensis</u>) - FLORIDA - New host record for State. Martin County--infested stems of <u>Bumelia</u> tenax (tough bumelia) in nursery at Hobe Sound, May 27. (Campbell).

A WHITEFLY (Tetraleurodes perileuca) - FLORIDA - New host records for State. Martin County--this species, an ARMORED SCALE (Abgrallaspis cyanophylli), and FERN SCALE (Pinnaspis aspidistrae) infested leaves and fruit of Asimina sp. (Pawpaw) at residence in Stuart, June 6. (Campbell, Denmark).

#### FOREST AND SHADE TREES

#### INSECTS

A CHRYSOMELID BEETLE (<u>Systena marginalis</u>) - FLORIDA - Northern half of Volusia County and southern half of Flagler County-heavy numbers, several hundred per shirt of observers June 24, damaged <u>Taxodium</u> sp. (baldcypress) trees. About one-third to one-half of trees brick red; general feeding on smaller trees around ponds will result in growth reduction in 1978. (Wilkinson).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA - New county record. Benson County--adult collected from attractant trap at Sully's Hill Game Preserve, Devils Lake, by C.G. Scholl, June 23, 1977. Determined by E. Balsbaugh. (Balsbaugh, Scholl).

ELM LEAF BEETLE (<u>Pyrrhalta luteola</u>) - ALABAMA - Madison, Calhoun, Marshall, Randolph, Lee, Chambers, Montgomery, Dallas, and Tallapoosa Counties--larvae and adults defoliated thousands of Chinese elms along streets, highways, and on lawns. (Bryant et al.). TENNESSEE - Middle area--up to 50% defoliation on elm trees in many locations. (Gordon, Bruer).

NORWAY MAPLE APHID (Periphyllus lyropictus) - CALIFORNIA - New county record. San Joaquin County--adults found on leaves of maple at Stockton by D. Giesing, May 20, 1977. Determined by R. Gill. (Hawkins).

#### MAN AND ANIMALS

#### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - TEXAS - Counts by county: Brewster, Jeff Davis, Terrell, Pecos, Upton, Winkler, and Crockett--light to heavy on cattle; Terrell and Pecos--moderate on sheep June 13-24; and Cottle, King, and Knox--heavy on cattle June 27. (Neeb, Boring). OKLAHOMA - Comanche County--moderate to heavy on cattle. (Arnold). KANSAS - Averages per head by county: Ellis 150, decreased on yearling steers (Harvey), and Ellsworth 100-200 on range cattle (Brooks). INDIANA - Averages per side by county: Warren--150 on 15 cattle, and Grant--10 on 15 cattle. (Williams).

FACE FLY (<u>Musca autumnalis</u>) - INDIANA - Warren and Grant Counties--averaged 11 per face on 15 mixed cattle. (Williams). WISCONSIN - Brown County--6 per face on cattle. (Lovett).

EAR TICK (Otobius megnini) - TEXAS - Counts June 24: Blacklands-heavy in some areas, 30-50 per ear on some animals; Hill and Stephens Counties--heavy on some animals. (Hoelscher).

#### STORED PRODUCTS

# INSECTS

ANGOUMOIS GRAIN MOTH (<u>Sitotroga cerealella</u>) - ALABAMA - Houston County--larvae and adults very heavy, crawling all over grain, trailer and ground where corn stored in drying trailers at drying station. (Roney).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

A MYMARID WASP (Anaphes flavipes) - Parasitism of Oulema melanopus (cereal leaf beetle) eggs on oats (unless otherwise stated) represents new county records collected in 1977. (T.L. Burger).

			Collection		
County	Area	Collector	Date	Determiner	
ОНІО					
Huron	Ridgefield*	C. Edinger	May 27	P. DeWitt	
Seneca	Thompson*	C. Edinger	May 27	P. DeWitt	
Clermont	Williamsburg*	C. Edinger	May 27	P. DeWitt	
Fulton ·	Fulton*	C. Edinger	June 1	P. DeWitt	
Franklin	Jefferson*	P. Turner	June 3	P. DeWitt	
Jefferson	Island*	C. Custer	June 10	P. DeWitt	
VIRGINIA					
Bath	Williamsville**	W. Jones	June 10	P. DeWitt	
MARYLAND					
Kent	near Chesterton	R. Dysart			
		R. Bingham	June 17	R. Dysart	
		0		•	

<sup>\*</sup> Township

<sup>\*\*</sup> Magisterial District

A EULOPHID WASP (Tetrastichus julis) - Recoveries of 20+% parasitized Oulema melanopus (cereal leaf beetle) larvae by State and county. All collected in 1 oat field each unless otherwise stated. INDIANA - Pulaski--100% (5 of 5 larvae) in Jackson Township June 7. OHIO - Morrow--79% in Washington Township June 2 and 55% in Canaan Township June 3, Richland--70% in Washington Township June 2; Putnam -- 35% in Blanchard Township June 3; Monroe--97% in Malaga Township June 6; Shelby--60 and 20% in 2 Van Buren Township fields, 86% in McLean Township, and 72% in Turtle Township June 6. MICHIGAN - Newaygo--60% in Ensley Township June 3; Monroe--80% in Milan Township, and 30% in Ash Township June 8; Oakland--60 and 70% in 2 Lyon Township fields June 9. VIRGINIA - Pulaski--56% in Pulaski Magisterial District May 8, 23% on June 7 and 83% on June 8 in Dublin Magisterial District; Roanoke--42% in Catawba Magisterial District June 7: Alleghany--81 and 80% in 2 Bolling Springs Magisterial District fields June 8. WEST VIRGINIA - Jackson--55 and 76% in 2 Grant Magisterial District fields June 7. PENNSYLVANIA - Perry--52% in Liverpool Township June 7; Franklin--37% in Montgomery Township June 8; Cumberland--27% in Dickinson Township June 10; Franklin--37% in Quincy Township June 10. NEW YORK - Oswego--50% in Volney Township June 3. New county records for  $\underline{T}$ .  $\underline{julis}$  collected from

oats (unless otherwise stated) in 1977 follow. (T.L. Burger).

		C	ollectio	n
County	Area	Collector	Date	Determiner
INDIANA				
Blackford	Harrison*	H. Bollinger	May 27	V. Brunjes
Lake	Center*	B. Cummings	May 31	V. Montgomery
Wayne	Franklin*	R. Carandang	June 2	V. Brunjes
Fayette	Franklin*	R. Carandang	June 2	V. Brunjes
Madison	Pipe Creek*	V. Knapp	June 2	V. Brunjes
Brown	Washington*	V. Brunjes	June 3	V. Brunjes
Putnam	Jefferson*	R. Heaton	June 6	V. Brunjes
Owen	Wayne*	R. Heaton	June 8	V. Brunjes
Monroe	Washington*	R. Heaton	June 8	V. Brunjes
Wells	Union*	H. Bollinger	June 10	J. Favinger
Carroll	Jackson*	G. Teresinski	June 13	V. Montgomery
Steuben	Fremont*	G. Teresinski	June 15	V. Montgomery
Lagrange	Eden*	G. Teresinski	June 15	V. Montgomery
Noble	Green*	G. Teresinski	June 15	V. Montgomery
OHIO				
Richland	Franklin*	L.C. Ault	June 2	V. Montgomery
Harrison	Washington*	Kauffman,		
		R. Barth	June 2	V. Montgomery
Columbiana	Elk Run*	P. Gipp	June 3	V. Montgomery
Monroe	Benton*	D.W. Pollack	June 6	V. Montgomery
Athens	Alexander*	K.E. Ackerman	June 7	V. Montgomery
Crawford	Sandusky*	K. Witter	June 8	V. Montgomery
Washington	Watertown*	C. Cunningham	June 8	V. Montgomery
Union	Paris*	L. Wilson	June 9	V. Montgomery
Van Wert	Hoaglin*	C. Edinger	June 9	V. Montgomery
Belmont MICHIGAN	Smith*	D. Bonnett	June 10	V. Montgomery
Bay	Merritt*	D. King	June 21	V. Montgomery

<sup>\*</sup> Township

<sup>\*\*</sup> Magisterial District

 $\underline{\text{T. julis}}$  continued from previous page.

			Collection
County	Area	Collector	Date Determiner
VIRGINIA			
Botetourt	Fincastle**	W. Clement	June 2 V. Montgomery
Warren	Creek**	J.R. Tate	June 2 V. Montgomery
Roanoke	Catawba**	W. Clement	June 7 V. Montgomery
Alleghany	Jackson River**	W. Clement	June 8 V. Montgomery
WEST VIRGINI			
Pocahontas	Little Levels**		
100411011045	(2 wheat fields)	E. Bostic	May 23 V. Montgomery
Mineral	Cabin Run**		
minorar	(1 grass field)	D.V. Davis	May 23 V. Montgomery
Morgan	Allen**		
	(1 wheat field)	C. William	May 24 V. Montgomery
Grant	Petersburg**		· ·
02 411 0	(1 barley field)	E. Prunty	May 25 V. Montgomery
Barbour	Pleasant**		
	(1 oat field)	G. Mouser	May 31 V. Montgomery
Hampshire	Romney**	P. Smith	May 31 V. Montgomery
Brooke	Buffalo**	A. Tustin	June 1 V. Montgomery
Randolph	Bever1v**	Haynes	June 3 V. Montgomery
Tucker	St. George**	J.D. Stiles	June 3 V. Montgomery
Jackson	Union**	L.E. Sisson	June 7 V. Montgomery
MARYLAND			
Kent	near Chestertown	R. Dysart	
		R. Bingham	June 17 R. Dysart
Queen Annes	near Sudlerville	R. Dysart	
		R. Bingham	June 21 R. Dysart
Caroline	near Henderson	R. Dysart	
		R. Bingham	June 20 R. Dysart
NEW JERSEY			
Hunterdon	Oldwick	G. Angelet	May 31 R.J. Dysart
Burlington	near Rancocas	R. Dysart	
		R. Bingham	June 21 R. Dysart
PENNSYLVANIA			
Cumberland	Dickinson*	S. Maxwell	May 25 V. Montgomery
Mifflin	near Lewistown	R. Bingham	June 2 R.J. Dysart
Union	near Foresthill	R. Bingham	June 3 R.J. Dysart
Clinton	near Beach Creek		June 3 R.J. Dysart
Perry	Spring*	S. Maxwell	June 6 V. Montgomery
Franklin	Guilford*	S. Maxwell	June 8 V. Montgomery
Lehigh	Heidleburg*	J. Raub	June 16 V. Montgomery
Beaver	North Sewickley*		June 17 V. Montgomery
Lawrence	Plain Grove*	J. Lilley	June 17 V. Montgomery
Elk	Benzingel*	W. Puchaez	June 17 V. Montgomery
NEW YORK	Description	m m ma	T 9 17 14
Allegany	Burns*	T.F. Ely	June 3 V. Montgomery
Saratoga	Galway*	R.G. Spaide	June 6 V. Montgomery
Cattaraugus	Conewango*	L. Ely	June 13 V. Montgomery
Lewis	West Turin	B. Root	June 17 V. Montgomery

<sup>\*</sup> Township \*\* Magisterial District

A PHYTOSEIID MITE (Typhlodromus fallacis) - MICHIGAN - This major predator mite in commercial apple orchards now active. Some orchards show heavy numbers of predator mites associated with very heavy numbers of Panonychus ulmi (European red mite) and Tetranychus urticae (twospotted spider mite). (Brunner).

# FEDERAL AND STATE PROGRAMS

#### DISEASES

BLACK STEM RUST (<u>Puccinia graminis</u>) - Aecial collections from barberry by State and county June 1-14: MINNESOTA--Goodhue, Wabasha, and Washington (Landon et al.); WEST VIRGINIA - 2 collections in Monroe and Greenbrier (Bostic). Pycnial infection in Jefferson County, PENNSYLVANIA. (Shiver). Most aecia collected from barberry immature. (Roelfs, Long). Aecial collections for June 15-28: WISCONSIN - Dane (Arny et al.) and PENNSYLVANIA - Centre from barberry nursery at State College (Albright). Collection in May in VIRGINIA identified as race RKQ. (Roelfs, Long).

OAT STEM RUST (Puccinia graminis var. avenae) severities light in many collections from oat nurseries in Dallas (Gilmore), McLennan, Bee, and Potter (McDaniel) Counties in TEXAS June 1-14. First report in TEXAS Panhandle in recent years. Traces in fields in Sumner (Goodfellow) and Elk (Porterfield) Counties, KANSAS, and Adams (Baker) County, NEBRASKA. Collected from Darlington County, SOUTH CAROLINA (Harrison); Yolo County, CALIFORNIA (Prato); and Story County, IOWA (Behizadeh), nurseries. First found in early June on oats near barberries on university campus at University Park, PENNSYLVANIA. Oat stem rust traces in northern Kansas, southern and eastern Nebraska, Iowa, southern MINNESOTA and eastern SOUTH DAKOTA June 15-28. With only traces of rust and most of oat crop past heading, no threat from stem rust exists. Following races identified from collections received before June 22. (Roelfs, Long).

	No. of			of Isol tem Rust	lates of Races	
Area	Collections	2	31	61	77	87
TX-South	25		55	15	2	1
TX-Central	16	4	36	7	1	
OK	1		2	1		
AL	3		9			
FL	2	2	3			
LA	4		9	3		

RYE STEM RUST (<u>Puccinia</u> graminis var. secalis) - Trace on rye near barberries in Dane County, WISCONSIN, June 1-14. Rye stem rust reported June 15-28 in northern States only from Dane County. (Roelfs, Long).

WHEAT STEM RUST (<u>Puccinia graminis</u> var. tritici) - Traces on wheat as far north as Fargo, <u>NORTH</u> DAKOTA, by June 7. (Miller). Secondary spreads from earlier infections found at Rosemount and Waseca, <u>MINNESOTA</u>, on June 13. In KANSAS traces observed in plots June 1 have not developed any further. Traces in commercial fields in Grant, Alfalfa, and Woods Counties, OKLAHOMA (Goodfellow), and

Barber, Butler, Meade, Osage, and Elk Counties, Kansas (Porterfield). Stem rust center with 90% severity in plot of TAM W-101 in Hale County, TEXAS. (Gilmore). Light in Darlington County, SOUTH CAROLINA. (Harrison). Heavily rusted plant in nursery at Urbana, ILLINOIS. (Jedlinski). Few infections on wheat near barberry bushes in Dane County, WISCONSIN. Collections from barley at Tifton, GEORGIA, identified as 151-QCB and at Baton Rouge, LOUISIANA, identified as 113-RPQ June 1-14.

Less wheat stem rust observed June 15-28 in commercial wheat fields in Kansas and NEBRASKA than in 1976. Severities of 20% on susceptible varieties in plots at Belleville, Kansas, and York, Nebraska. Severities trace to 1% in varietal demonstration plots throughout northern Kansas on Parker, Trison, Turkey, and TAM W-101. Traces of stem rust in commercial fields in COLORADO, Minnesota, the DAKOTAS, and Wisconsin. In nurseries at Rosemount, Minnesota, severities on McNair 701 winter wheat reached 20% and on Baart spring wheat trace to 1%. Following races identified from collections received before June 22. (Roelfs, Long).

	No. of	No.	of 15	Isol	ates	of 151	Whea	t Ste	em Ru	ust	Races
Area	Collections	TNM	TLM	TDM	QCB		QSII	RKQ	RTQ	RCR	HNL
MEXICO	3		2		3			1			
TX-South	12	7			1	2	9	4	1		
TX-Central	7				12	3	3				3
TX-North	2				3		3				
OK	11	12	1	2		5	9	2			
AL	1				3						
FL	5	8	1		6						
GA	6	11	2		3	2					
LA	13				24	2	3			7	3
MS	1				3						

On barley, traces of stem rust at Lamberton, MINNESOTA, on susceptible trap variety Hypana June 15-28. Traces common in commercial fields in northeastern COLORADO. (Roelfs, Long).

DUTCH ELM DISEASE (<u>Ceratocystis</u> <u>ulmi</u>) - CALIFORNIA - Sonoma County--5 new sites (<u>at least 3</u>,000 ft from previously infested area) and 1 old site discovered, 3 were at Santa Rosa. All trees large-leaf type, American and European. (Krass).

# INSECTS

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - OHIO - Greene and Fayette Counties--adults increasingly common, swept from corn. (Drees). Wayne County--adults 5 per plant in marginal corn rows (Treece) and 2.3 per sweep in 20-inch oat field (Drees). MICHIGAN - Kalamazoo County--adults heavy in corn fields in southwestern area. (Hammon). PENNSYLVANIA - Adults per 20 sweeps, and eggs and larvae per 2 ft row, unless otherwise stated, on oats by county June 21-24; Carbon 1.0 larva; Luzerne 0.1 adult, 0.2 larva; Susquehanna 0.1 adult, 0.5 larva; Elk 0.2 egg, 1.4 larvae. (Krizauskas, Palisin).

CITRUS BLACKFLY (Aleurocanthus woglumi) - FLORIDA - Dade County-lightly infested Mangifera sp. (mango) trees at Coral Gables in mid-June. Spraying of all mango trees in infested area started June 29, 1977, (Mead).

GRASSHOPPERS - TEXAS - Hardeman, Shackelford, Throckmorton, Wichita, Wilbarger, and Young Counties--heavy on pastures. (Boring). OKLAHOMA - Pittsburg County--M. bivittatus, M. differentialis, and Syrbula admirabilis heavy in improved pastures and cropland at Hartshorn and Savanna. Cimarron County-unspecified grasshoppers 0-5 (averaged 12 in heavier spots) per sq yd of rangeland in southwest area. (Arnold).

KANSAS - Southwest area--grasshoppers commonly heavy in weeds along field borders, particularly heavy in Morton County. (Mock et al.). Jackson County--mostly Melanoplus femurubrum heavy along some field borders near Horton. (Porterfield). NEBRASKA - Nymphs and adults ranged from less than 1 to 70+ (averaged 25) per sq yd in pastures adjacent to North Platte River and in Cherry and Sioux Counties June 24. Severely damaged range. Third instar nymphs to adults present. Areas with fewer than 1 per sq yd treated 2 years ago. Species listed in order of abundance: Ageneotettix deorum, Aulocara elliotti, Melanoplus sanguinipes, Amphitornum coloradus, and Trachyrhachys kiowa.

M. bivittatus adults in Panhandle. Heavy in field margins; severely damaged alfalfa in several areas of the Panhandle. (Bell et al.).

NORTH DAKOTA - Grasshopper damage heavy to corn; populations averaged 20 per sq yd. Completely defoliated plants 7-9 ft tall bordering shelterbelt. Damage about 150-200 ft into field where young developing cobs (silks) destroyed. Controls applied.

Melanoplus bivittatus, M. femurrubrum, and M. sanguinipes from 4th instar to adult, occasional 2nd and 3rd instars found. (Scholl). WASHINGTON - Northern Columbia and Garfield Counties--Melanoplus sanguinipes and M. packardii economic on 15,000 acres of rangeland June 24. Most in 1st and 2nd instars. Infestations late compared with other years. (Jackson).

GYPSY MOTH (Lymantria dispar) - PENNSYLVANIA - Pike County-three pupae at Porters Lake, June 23. Defoliation 100%. Heavy mortality of pest due to wilt disease in defoliated areas. (Jackowski). Pike and Monroe Counties--larvae pupated. (Kim). NEW YORK - Monroe County--3rd, 4th, and 5th instar larvae feeding actively at East Rochester. Infestation spreading north and south, currently confined to towns of Penfield, Perinton, and Pittsford. (Personius). VERMONT - Champlain Valley--defoliation of ornamentals and forest trees common. (MacCollom).

JAPANESE BEETLE (Popillia japonica) - TENNESSEE - Blount County-heavy population of adults causing defoliation of variety of plants in Cades Cove and Townsend areas. Traps set in Cades Cove area in effort to reduce adult population. (Turpen). KENTUCKY - Madison County--adult damage to corn leaves heavy enough to warrant control. (Wilson). OHIO - Clermont County--adults became active June 17, eggs in soil by June 21. (Wegner). Wayne County--defoliated entire vines in vineyards. (Drees). MICHIGAN - Macomb County--first adults of season June 24. (Hanna). SOUTH CAROLINA -

Japanese beetles in Marlboro County--up to 60% foliar loss in apple trees and home gardens. (White). MARYLAND - Eastern Shore counties--adult activity increased, 1 sweet corn field at Hurlock, Dorchester County, had 2-3 adults per silk in 0.5-acre section. Heaviest on weeds in adjacent, recently harvested grain field. (Hellman, Pinto).

ORIENTAL FRUIT FLY (<u>Dacus dorsalis</u>) - CALIFORNIA - Los Angeles County--infestation eradicated as of June 16, 1977, through cooperative Federal, State, and county efforts initiated August 1976. Eradication cost \$438,000. (Rominger). Considered second largest known infestation in the United States. (Wilson).

RANGE CATERPILLAR (<u>Hemileuca oliviae</u>) - OKLAHOMA - Cimarron County--larvae 0-20 (averaged 2-5) in heavier spots per sq yd of rangeland between Seneca Creek and Currumpa Creek in southwest area. Larvae less than 1% 2nd instar, 80% 3rd and 4th, and 20% 5th and 6th instar. (Arnold).

SCREWWORM (Cochliomyia hominivorax) - Total of 15 cases reported from continental United States June 12-18 as follows: New Mexico 1, Arizona 14. (Meadows). Total of 114 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 698 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 117,706,200 as follows: Texas 91,575,600, New Mexico 5,652,000, Arizona 19,488,600, California 990,000. Total of 136,557,400 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### WEEDS

DYERS WOAD (<u>Isatis tinctoria</u>) - CALIFONNIA - New county record. Calaveras County--detected in yard at West Point, by W. Andahl and T. Fuller, April 28, 1977. Determined by T. Fuller. Plants eradicated. (Hawkins).

# HAWAII PEST REPORT

General Vegetables - WESTERN FLOWER THRIPS (Frankliniella occidentalis) heavy, 5-25 adults and immatures per plant, on 75 percent of plants in 4 acres of Manoa lettuce at Hawaii Kai, Oahu, Damage heavy in 0.5-acre planting. BEET ARMYWORM (Spodoptera exigua) moderate to heavy (30-60% of leaves infested) on 0.5 acre of green onion. (L. Nakahara).

Turf and Pasture - GRASS WEBWORM (Herpetogramma licarsisalis) adults heavy in 50 acres Kikuyugrass pastures at Puu O Hoku, Molokai. No eggs or larvae. (Miyahira).

Beneficial Insects - LANTANA HISPID (<u>Uroplata girardi</u>) foliar damage to lantana heavy along roadsides and in pastures at Hoolehua and Kalae, Molokai, and in East Molokai. (Miyahira).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

# INSECTS

A WEEVIL (Baris lepidii Germar) - ILLINOIS - Madison County. (p. 490).

NEW COUNTY RECORDS

# INSECTS

ASPARAGUS APHID (Brachycolus asparagi) - MARYLAND - Worcester. (p. 490).

CHERRY MAGGOT (Rhagoletis cingulata) - INDIANA - Adult female taken June 17-19,1977, in New Jersey light trap in Wea Township, Tippecanoe County. Collected by M. McKinney. Determined by R.W. Meyer. (Meyer).

A EULOPHID WASP (Tetrastichus julis) - See p. 494-495.

A MYMARID WASP (<u>Anaphes flavipes</u>) - OHIO - Huron, Seneca, Clermont, Fulton, Franklin, Jefferson; VIRGINIA - Bath; MARYLAND - Kent. (p. 493).

NORWAY MAPLE APHID (Periphyllus lyropictus) - CALIFORNIA - San Joaquin. (p. 493).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA - Benson. (p. 492).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - KANSAS - Taken in light traps June 29, 1977, and determined by K.O. Bell. Collected in Pratt County near Pratt by L. Wilson and in Morton County near Elkhart by H.R. Williams. (Bell).

#### WEEDS

DYERS WOAD (Isatis tinctoria) - CALIFORNIA - Calaveras. (p. 499).

#### CORRECTIONS

CPPR 2(23):393 - BLACK STEM RUST (Puccinia graminis var. tritici) ... Uredospores trapped in rainwater April 17-24 ... should be  $\underline{\text{May}}$  17-24 ... (Roelfs, Long).

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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

1 5

	Life Stage	Host	Port of Entry	Probable Origin	Desti- nation
Xanthomonas sp. cancrosis B Det. H. L. Rubin	bacterial	on lemons from aircraft stores	Miami	Argentina	FL
Dacus dorsalis Hendel oriental fruit fly Det. E. Uyeda	larval	in mango fruit from baggage	Hilo	Hawaii	CA
<pre>Hylurgops palliatus (Gyllenhal)     a scolytid beetle     Det. E. J. Ford</pre>	adult	in wood crates of wheels	Baltimore	Germany	USA
Megastigmus strobilobius Ratz. a torymid wasp Det. F. Krim	larval	in spruce seed	Hoboken	France	PA
Nysius huttoni White a lygaeid bug Det. J. L. Herring	adult	with cargo of kiwi fruit	New York	New Zealand	USA
Phloeosinus sp. possibly perlatus a scolytid beetle Chapuis Det. D. M. Anderson	adult	in wood bracing with ceramics	Savannah	Japan	USA
Trogoderma granarium Everts	all	with interior of private automobile	New York	Turkey	USA
<pre>Helicella cretica (Ferussac)</pre>	juvenile	on vans of military household goods	Houston	Greece	O X



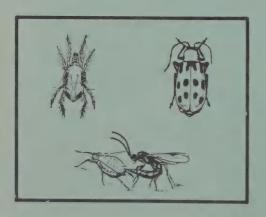
UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service Hyattsville, Maryland 20782

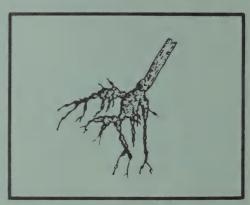
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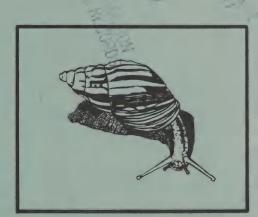


# Cooperative PLANT PEST REPORT





U.S. DEPARTMENT OF AGRICULTURE





This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

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U.S. Department of Agriculture
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Hyattsville, Maryland 20782

July 15, 1977 2(28):503-522

#### **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

# Current Conditions

ARMYWORM counts heavy on grasses and grains in parts of south-central, southeastern, and east-central North Carolina, northeastern and north-central Wisconsin, and northwestern and central Minnesota. (p. 505).

Problems mainly with FALL ARMYWORM in parts of Florida on corn (p. 507), pastures (p. 508), soybeans (p. 510), and peanuts (p. 511). Other problems on soybeans due mainly to YELLOWSTRIPED ARMYWORM in eastern Arkansas and BEET ARMYWORM in southeastern and south-central North Carolina. (p. 510).

#### Detection

New State records include HOLLYHOCK WEEVIL in West Virginia (p. 516), a NOCTUID MOTH in Iowa (p. 517), and an OECOPHORID MOTH in Virginia (p. 520).

For new county records see page 520.

Reports in this issue are for the week ending July 8 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

# DISEASES

ASTER YELLOWS VIRUS - See ASTER LEAFHOPPER below.

CURLY TOP VIRUS - See BEET LEAFHOPPER below.

# INSECTS

ARMYWORM (Pseudaletia unipuncta) - NORTH CAROLINA - Coastal Plain counties--larvae resulting from heavy adult flight of mid-June appeared in lush grass in early July. Larvae 8 per corn plant in fields up to 15 acres in size. Sampson, Jones, Lenoir, Wayne, Hyde, Moore, Scotland, Bladen, and Robeson Counties--damaged corn. About 5,000 acres with some feeding injury in Lenoir County. (Harper et al.). Bladen, Scotland, Moore, and Wayne Counties-severely damaged Coastal Bermudagrass; 15 to 50-acre fields infested with 30-40 2nd to 4th instar larvae per sq ft of soil surface. (Baker et al.).

WISCONSIN - Chippewa County--armyworm outbreak, 12-15 per sq ft of Sudangrass. Marathon County--still heavy in oats and chemical controls started. Infestations spotty and about 10% of 0.75-inch larvae parasitized. (Lovett). MINNESOTA - Larval averages per sq ft of small grains by county: Red Lake--3-5, 5+ in 1 field 0.5 mile south of Red Lake Falls, treated; Polk--1-3; Pennington, Norman, and Mahnomen--up to 1; Roseau--10 in 1 field, treated; Scott--up to 20 in 1 field near Shakopee. Larvae 0.25-1.50 inches, mostly small. (Sreenivasam). NORTH DAKOTA - Larval averages per sq ft by county: Griggs--1 in 1 barley field, and Stutsman--less than 1 in 1 wheat field. Larvae 0.25-1 inch long. (Gebeke, Scholl).

ASTER LEAFHOPPER (Macrosteles fascifrons) - WISCONSIN - Over 1% of leafhoppers infected with ASTER YELLOWS VIRUS. Controls advised on vegetables. (Lovett).

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Monterey County--treatment of weeds continued. Total of 10,645 acres treated at King City, San Lucas, San Ardo, Bradley, and Lockwood. Treatment of 878 miles of roadsides and ditchbanks completed in King City and Peach Tree Valley. (Hawkins).

CORN EARWORM (Heliothis zea) - TEXAS - Panhandle area--infested corn whorls in most of area July 1. (Patrick). OKLAHOMA - Counts by county: Caddo--infested average of 100% of corn ears, Muskogee--60% of ears, Pontotoc--heavy in ears, and Grady and Garvin--1-3 per 10 sweeps of alfalfa. (Arnold). ARKANSAS - Washington County--larvae 1 per 50 ears, very light, in field of silking corn. (Mayse). MISSISSIPPI - Clay, Monroe, Chickasaw, Webster, and Oktibbeha Counties--larvae fed on 3.5-45% of developing corn ears. All corn in soft dough stage. (Anderson). TENNESSEE - Western area--heavily damaged ears of early planted corn. (Locke).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Curry and Roosevelt Counties--heavy on sorghum. (Staff). TEXAS - Counts on sorghum by county July 1: Comanche--increased; High Plains area-increased, moderate to heavy in few fields; Glasscock, Reagan, Upton, Midland, and Howard--light to moderate. (Patrick et al.).

OKLAHOMA - Corn leaf aphid averages per plant by county: Grady-75 on 40-inch forage sorghum, Garvin-25 on 18-inch grain sorghum, and Muskogee-50 on sorghum. (Arnold). ARKANSAS - Randolph, Clay, and Greene Counties--significantly lighter on sorghum week ending July 1 than in past period, few live aphids found. (Mayse). MISSISSIPPI - Monroe and Clay Counties--averaged 0.5 per whorl of late-whorl corn. Monroe County--light on Sudangrass. (Anderson).

GREENBUG (Schizaphis graminum) - TEXAS - Counts on sorghum July 1; Comanche and Hill Counties, and High Plains area--increased; western Panhandle area--0-5% of plants infested; Glasscock and Reagan Counties--light. (Leser et al.). OKLAHOMA - Counts on sorghum by county: Caddo--light to moderate; Payne--averaged 45 per plant at Perkins; Garvin and Grady--very light. (Arnold). NORTH DAKOTA - Griggs County in 5 of 6 fields and Foster County in 9 of 10 fields--this species, ENGLISH GRAIN APHID (Macrosiphum avenae), and an APHID (Rhopalosiphum padi) trace, up to 4 per Tinear row ft. Small grain from boot to headed stages; majority of fields headed out. Winged and wingless adults and nymphs found. (Scholl). MINNESOTA - Redwood County--averaged 100+ per sorghum plant, heavy, at Lamberton. Otter Tail County--fewer than 10 per plant on oats near Fergus Falls. (Sreenivasam).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Still on alfalfa: East-central, south-central, and southeastern counties-0.1-4 per sweep; Columbia, Sheboygan, Sauk, and Iowa Counties-averaged 4 per sweep. Heavy populations threaten quality of second and third growth alfalfa. Counts per 25 sweeps of vegetables: Central Sands area--1.5-3 on potatoes and 2.5 on snap beans; Spring Green area--4-8 on potatoes. Population of mostly nymphs indicate infestation present very long time. (Lovett). NEW YORK - Central area--fewer than 1 per sweep of forage in most fields. (Willson).

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - Suwannee County-population decreased from 40% to 32% infestation on untreated flue-cure tobacco at Live Oak June 15 to June 29 (Tappan). SOUTH CAROLINA - Georgetown and Darlington Counties--infestation 10% or less, light, on tobacco. (Griffith). NORTH CAROLINA - Middle Belt area--still below threshold in 36 tobacco fields. (Baumhover).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Suwannee County-plants with at least 1 larva per plant increased from 81% on June 15 to 99% by June 29 on untreated flue-cure tobacco at Live Oak. (Tappan).

TOMATO HORNWORM (Manduca quinquemaculata) - SOUTH CAROLINA - Orangeburg County  $\overline{-5\%}$  infestation, moderate, with moderate damage to 20 acres of bell peppers. (Griffin).

# CORN, SORGHUM, SUGARCANE

#### DISEASES

HOLCUS SPOT (Pseudomonas syringae) - KANSAS - Favored by recent rains and warm temperatures on sorghum; plants infected by county: Morris 20%, Harper trace, Marion 5%, Comanche trace, Finney 5%, and Douglas 10%. Infections light on corn; plants infected by county: Harvey trace, Stevens 10%, Grant 10%, and Meade 10%. (Sim).

BACTERIAL STRIPE (Pseudomonas andropogonis) - KANSAS - Favored by recent rains and warm temperatures on sorghum. Plants infected by county: Marion 20%, Comanche trace, and Harper 20%. (Sim).

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Obvious in most corn fields in south-central district; plants infected by county: McPherson 100%, Harvey 80-100%, Sedgwick 30%, Stafford 80%, and Edwards 20%. (Sim).

COMMON SMUT (Ustilago maydis) - KANSAS - Finney County--only in 3 corn fields, infections trace to 30%, 2 fields with signs of hail damage. (Sim).

## INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - MINNESOTA - "Shotholes" evident in corn; no larvae in stalks. Infestation by county: Anoka-44% in 1 field and Carver-66% in 1 field; treatment needed. (Sreenivasam). WISCONSIN - No flights as of July 5. Dissections of corn: Rock County-50% 5th instars, 20% 4th instars, and 30% 3rd instars; Green County-80% 5th instars and 20% 4th instars. (Lovett). INDIANA - Washington County-old and fresh pupae found in corn. (Matthew). OHIO - Muskingum and Harrison Counties--larvae damaged 50+% of corn plants, larvae averaged 10-15 mm long. (Drees).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - NEW MEXICO - Northern Chaves, Roosevelt, and Curry Counties--first generation larvae averaged 3-5 per cornstalk. (Staff). TEXAS - Counts on corn by county July 1: High Plains area--first generation larvae in many fields, pupae few, adults light in traps; Randall, Deaf Smith, Oldham, Moore, Hutchinson, and Potter--2-7% of stalks infested; northeast Panhandle area--10% of stalks infested; Hartley and Dallam--1-5% of whorls infested. (Morrison et al.).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Alachua County-heavy damage to field corn in northwestern area, corn still green. (Baker). ALABAMA - Marengo County--1-4 larvae per stalk damaged whorls, tassels, and ear tips in 10-acre corn field at Faunsdale. Houston County--this species and CORN EARWORM (Heliothis zea) heavily damaged corn countywide. (Yates, Stephenson). Macon, Autauga, and other counties--S. frugiperda developed heavy numbers on grain sorghum. Control efforts poor in l field in Macon County. (Smith et al.). OKLAHOMA - First of season. Garvin and Grady Counties--light on sorghum. Caddo County--light on corn. (Arnold).

SORGHUM WEBWORM (Celama sorghiella) - OKLAHOMA - First of season. Garvin County--single full-grown Tarva in sorghum head. (Arnold).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - TEXAS - Dallam County--eggs on 1% of corn plants in some fields in northwest area July 1. (Patrick).

CORN ROOTWORMS (Diabrotica spp.) - IOWA - Plymouth, Louisa, Henry, Des Moines, Warren, Polk, Dubuque, Story, and Dallas Counties--WESTERN CORN ROOTWORM (D. virgifera) 3-6 per plant on tasseling corn, no silks cut, egg laying expected next 7-10 days. (J.R. DeWitt). INDIANA - Tippecanoe County--first adults of season on 10

sticky traps in corn field June 24 to July 1: NORTHERN CORN ROOT-WORM (Diabrotica longicornis) 37 males to 2 females, D. virgifera 15 males to 0 females. (Meyer). WISCONSIN - Rock and Green Counties-D. longicornis and D. virgifera beetles on one-third of corn plants. Grant County-about 50% pupae and 50% larvae; only few emerged. (Lovett).

CORN FLEA BEETLE (Chaetocnema pulicaria) - KENTUCKY - Hardin County--adults averaged 3.1 per plant of early whorl corn in late-planted field. (Sloderbeck).

A FLEA BEETLE (Systena frontalis) - OHIO - Tuscarawas County-severely damaged 15-inch corn plants, adults averaged 3.9 per plant. (Drees).

A WEEVIL (Sphenophorus callosus) - NORTH CAROLINA - Haywood County--adults identified from corn field. Damaged 50% of plants. No damage this severe reported from mountains before this detection. Usually infests Coastal Plain counties. (Krenzer).

SORGHUM MIDGE (Contarinia sorghicola) - ARKANSAS - Clay County-adults about 1 per 25 heads in early planted sorghum field near Piggott week ending July 1. (Mayse).

#### SMALL GRAINS

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEW YORK - More wheat fields infested, 1-5% of plants, mostly in late-planted fields. Pupated July 1 in heavily infested (40+%) field. (Willson).

HESSIAN FLY (Mayetiola destructor) - OKLAHOMA - Percent wheat stems infested (samples collected just before harvest, 1-4 fields each) by county: Alfalfa--2%, Payne--2, 2, 6, and 2%; Pawnee--10, 8, 2, and 2%; Osage--4 and 2%; Mayes--4%, Washington--4%; Ottawa--2, 4, and 2%; Craig--2%; Tulsa--2 and 14%; Grady--2 and 8%; Lincoln--2 and 10%, Pottawatomie 2, 2, 2, and 2%; Seminole--8%; Cherokee--12%; Wagoner--12%; McIntosh--2%; Muskogee--60%; Carter--2 and 4%; Johnston--2 and 2%; Stephens--10%; and Marshall--6 and 2%. (Arnold).

#### TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Ouachita County-larvae heavy, destroyed grass on football field week ending July 1. (Barnes). FLORIDA - Mostly S. frugiperda larvae moved out of drying corn fields into nearby fields including pastures. Infestations worst in recent years on pastures of Bermudagrass and millet, which were being stripped. (Cobb).

A CHRYSOMELID BEETLE (<u>Trirhabda attenuata</u>) - MONTANA - Several southeastern counties—severely defoliated silver leaf sage on thousands of acres. Completely defoliated some sage bushes. (Jensen).

CHINCH BUG (<u>Blissus leucopterus leucopterus</u>) - OHIO - Wayne County-nymphs and adults averaged 229 per sq ft of turf, heavy. (Frost et al.).

## FORAGE LEGUMES

# DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Still most widespread alfalfa disease. Defoliation occurred when 50% or more of plants infected. Plants infected by county: Marion 5%, Harvey 10%, Sedgwick trace, Harper 50%, Barber 100%, Edwards 80%, Ford 5%, Finney trace, Kearny 10%, Morton 10%, and Pawnee 40%. (Sim).

# INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Counts per 25 sweeps of alfalfa by county: Valencia--30-50 adults and up to 50 larvae near Los Lunas, some damage (Heninger); Eddy and Chaves--1-5 adults, below economic levels, on second growth (Riddle). TEXAS - Counts per 25 sweeps of alfalfa by county June 28: Hudspeth--1 adult at Ft. Hancock, 3 larvae and 2 adults at Acala; El Paso-4 larvae and 1 adult at Tornillo, 8 larvae and adults at Clint and Fabens. (Burgess). WISCONSIN - Southern two-thirds of State-larvae 1-4 per sweep, light, in most alfalfa fields. (Lovett).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - Increased significantly in alfalfa and other crops. Dane, Iowa, Grant, Sauk, Waushara, Portage, and Marquette Counties--1-4 larvae per sweep common. Sheboygan, Manitowoc, and Calumet Counties--light on alfalfa. Noted as far north as Bayfield County. (Lovett).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Counts per 10 sweeps of alfalfa by county: McClain 16, Grady 3, and Garvin 25. (Arnold). ARKANSAS - Washington County--nymphs 45 and adults 20 per 10 sweeps of alfalfa. (Mayse).

LYGUS BUGS (Lygus spp.) - TEXAS - Counts per 25 sweeps of alfalfa June 28 by county: Hudspeth--13 nymphs and 26 adults at Ft. Hancock, 2 nymphs and 6 adults at Acala; El Paso--3 nymphs and 12 adults at Tornillo, 11 adults at Clint and Fabens. (Burgess).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Lyon County-this species and mostly BLUE ALFALFA APHID (A. kondoi) 0-100 (averaged 35) per sweep on hay alfalfa in Mason and Smith Valleys. Infestations spotted and variable. (Knight). Humboldt County-A. pisum 5-180 (averaged 41) per sweep on seed alfalfa at Jungo. (Stitt). WISCONSIN - Counts per sweep of alfalfa by county: Calumet, Dodge, Manitowoc, and Sheboygan 5-200; southeastern and southwestern areas--1-30. (Lovett).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - TEXAS - Adults per 25 sweeps of alfalfa by county June 28: Hudspeth--39 at Ft. Hancock and 15 at Acala; El Paso--9 at Tornillo and 2 at Clint and Fabens. (Burgess).

ALFALFA BLOTCH LEAFMINER (Agromyza frontella) - PENNSYLVANIA - Wayne County--adults 15-25 per sweep of alfalfa near Clinton June 29, some mines present. (Jackowski).

#### SOYBEANS

# DISEASES

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS - McPherson County--100% of soybean plants infected in 1 field; Pratt County--40% of plants infected in 1 field. (Sim).

# INSECTS

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) - OKLAHOMA - Cherokee, Wagoner, Muskogee, and Le Flore Counties--heavy in spots in scattered soybean fields. (Arnold). ARKANSAS - Counts on soybeans. Phillips County--2nd to 5th instar larvae 4-6 per row ft week ending July 1, some fields treated. (Barnes). Southeastern area--larvae 3-4 per row ft, treatments applied. (Wall). Northeastern area--larvae currently heavy in several fields, some late-planted fields severely defoliated in spots where larvae 2-3 per row ft. (Kimbrough). St. Francis County--heavy in many fields, up to 15 larvae per sq ft in some fields. (O'Quin). ALABAMA - Tuscaloosa County--larvae fed on leaves of 50% of soybean plants in 45-acre field. Marengo County--larvae of mostly this species in 200-acre field. (Pitts, Yates).

BEET ARMYWORM (Spodoptera exigua) - FLORIDA - Gadsden County-light on untreated soybeans at Quincy, averages of 7-10 per plant June 29 decreased to 1 per plant by July 6; reduction attributed to natural control. Larvae about 58% parasitized (2 dipterous and 4 hymenopterous parasite species) and 6% diseased. (Herzog). Jackson County--economic damage to young soybean plants near Marianna, most of cotyledons and first trifoliate leaves eaten. (Cobb). NORTH CAROLINA - Damage continued primarily in late soybeans, particularly following small grain. Pamlico, Lenoir, and Bladen Counties--damage extensive, treatments applied to about 1,100 acres. (Rea et al.).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Alachua County-S. frugiperda principal pest, few BEET ARMYWORM (S. exigua), and some Heliothis sp. damaged 400 acres of 6 to 12-inch soybeans near Alachua June 30. Levy County-S. frugiperda and S. exigua currently damaged 80-acre soybean field near Williston, treated. (Baker). Jackson County-becoming problem on soybeans next to drying corn fields. (Cobb). ALABAMA - Macon and Bullock Counties--1st to 3rd instar larvae of this species and S. exigua fed on foliage of 3 to 6-inch soybeans and grasses in several fields. (Henderson et al.).

GREEN CLOVERWORM (Plathypena scabra) - ARKANSAS - Lee County--larvae severely defoliated young soybean plants week ending July 1, several fields treated. (Barnes). IOWA - Counts per ft of row of soybeans by county: Clinton--small to 5th instar larvae averaged 6-15; Black Hawk--8-10 larvae, 20% leaf loss. (J.R. DeWitt).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Macon County--larvae damaged 50+% of 1 to 5-inch soybeans in 25-acre field following ryegrass at Roba. Less damage on 200+ acres. (Henderson et al.). FLORIDA - Gulf County--serious problem on farm near Wewahitchka June 27, drought-weakened plants suffered sufficient damage from borer so that 1,000 acres replanted; still

serious problem July 6. (Herzog). Lesser cornstalk borer infested soybeans planted in fields previously in winter pasture of small grains. Jackson County--current damage serious on about 75% of tender, young, late-planted soybeans. (Cobb).

WHITEFRINGED BEETLES (Graphognathus spp.) - FLORIDA - Suwannee County--adults averaged 1 per ft of row in entire 50-acre soybean field 5 miles south of Live Oak; treatment needed. (Baker).

## PEANUTS

# INSECTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Jackson County-heavy damage to peanuts continued. (Cobb). SOUTH CAROLINA - Florence County--20-30% infestation on peanuts. (Griffith).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Jackson County-moved out of drying corn fields to become pest of adjacent peanut fields. (Cobb). Levy County-S. frugiperda and BEET ARMYWORM (S. exigua) damaged 100-acre peanut field near Williston enough to require treatment. Alachua County-S. frugiperda moved into peanut field near Newberry. (Baker).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Alachua County--first larvae of season on peanuts near Newberry (Baker); middle instars present near Archer July 6 (Mangold).

#### COTTON

# INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county June 29 to July 1: Cameron-adults 0-54 and punctured squares 0-55 per 100 plants; Hidalgo-punctured squares 0-37 per 100 plants; Willacy-punctured squares 0-80 per 100 plants; Kleberg--0-54% damaged squares; Nucces--9-45% damaged squares; San Patricio 0-49% damaged squares; Williamson and Milam--4% punctured squares; Bell--second generation in some fields at Holland; Stonewall--up to 40% of third-grown squares punctured, winter adults 0-3 per 400 row ft. (Cocke et al.). OKLAHOMA - Adults by county: Harmon--5 in 24 pheromone traps, Jackson--2 in 16 traps, and Greer--1 in 4 traps. (Arnold).

ARKANSAS - Boll weevil still very light in cotton fields week ending July 1. Jefferson County--up to 12 per 200 squares. (Wall). MISSISSIPPI - Continued light statewide as majority of cotton bloomed well and set bolls. Lack of rainfall caused problems in many areas. Adults by county: Lowndes--3 in 4 grandlure traps, Leake--14 in 12, Lafayette--4 in 3, Hinds--1 in 2, Franklin--2 in 1, and Calhoun--2 in 2. (Anderson). ALABAMA - Northern area--very light following first annual "hatchout" in 300,000+ cotton acres. Central and southern areas--light, occasional field in Bibb, Macon, Marengo, and Covington Counties with up to 55% punctured squares. (Gilliland et al.). TENNESSEE - Infested 1-9% of squares. (Locke).

BOLLWORMS (Heliothis spp.) - TEXAS - BOLLWORM (H. zea) and TOBACCO BUDWORM (H. virescens) counts on cotton by county June 28 to July 1: Cameron--0-70 eggs, 0-36 larvae, and 0-25 damaged squares per 100 plants; Hidalgo--0-100 eggs, 0-13 larvae, and 0-5 damaged squares per 100 plants; Willacy--0-13 eggs, 0-24 larvae, and 0-14 damaged squares per 100 plants; Kleberg--0-2 eggs, 0-11 larvae, and 0-23% damaged squares per 100 terminals; Nueces--0-4 eggs and larvae per 100 terminals, and 0-14% damaged squares; San Patricio--0-5 eggs and 0-12 larvae per 100 terminals; Refugio, Wilson, and Calhoun Counties -- increased; Williamson and Milam -eggs in most fields 0-10 (100 in 1 field) per 100 terminals; Comanche--egg laying light; Ellis and Navarro--eggs decreased, larvae light to heavy; Blacklands area--egg laying heavy, 80 eggs per 100 terminals, 3-5% damage; Hill and Johnson--adults of both species heavy in traps; Hale--H. zea 6 per night per trap; Castro and Lamb--H. zea 3 per night per trap; Crosby and Floyd--H. zea 1 in 2 nights per trap, decreased; High Plains area--H. virescens light in traps; El Paso, Pecos, Reeves, Howard, Martin, Glasscock, Reagan, Upton, and Midland--0-8 eggs and 0-4 small larvae per 100 terminals; El Paso Valley area--counts stable. (Robinson et al.).

ARKANSAS - Drew County-H. <u>zea</u> and <u>H. virescens</u> adults very heavy on cotton week ending July <u>T. Jefferson County-H. <u>zea</u> 382 and <u>H. virescens</u> 11 in 13 light traps for 5 nights. Larval ratios by county: Jefferson-6 <u>H. zea</u> to 8 <u>H. virescens</u>; Chicot--1 <u>H. zea</u> to 17 <u>H. virescens</u>; Lincoln-24 <u>H. zea</u> to 12 <u>H. virescens</u>. (Mayse). MISSISTPPI - <u>Heliothis</u> spp. eggs increased statewide. Selective insecticides initiated in many areas. Larval averages on cotton acreage by county: Lowndes--5% on 200 acres, Lee 2% on 800, Leake--5% on 1,200, Lafayette--2% on 2,000, Itawamba--5% on 1,200, Franklin--1% on 300, Sharkey--8% on 700, Quitman--5% on 2,000, Prentiss--8% on 75, Marshall--2% on 5,500, Coahoma--4% on 600, Calhoun--3% on 5,500, Benton--2% on 3,500, Sunflower--2% on 4,200, Webster--2% on 600, Tippah--1% on 2,100, and Noxubee--2% on 2,000. (Anderson). ALABAMA - Statewide--lst to 4th instar <u>Heliothis</u> spp. larvae 1-10 per 100 stalks in most cotton fields. Up to 50 larvae and 50 eggs per 100 plants in few fields. Adult flights increased statewide with H. zea predominant. (Scouts et al.).</u>

SOUTH CAROLINA -  $\underline{H}$ .  $\underline{zea}$  and  $\underline{H}$ .  $\underline{virescens}$  heavy but decreased last week of June in heavier cotton growing counties in lower part of State. Dillon County--20-60% infestation, up to 30-50 larvae per 100 plants. Marion County--up to 30% infestations, 15-30 eggs per 100 plants in some fields. Florence, Darlington, and Sumter Counties--up to 15% infestation. (Griffith). H. virescens 37-83% of larvae in 6 fields in Saluda County July 1 and 40-60% of larvae sampled in Edgefield County. York County--one 30-acre field and one 40-acre field had 20% infestation levels of second instar larvae with few eggs; several other fields had 0-5% infestation levels with few eggs. (Douglass). NORTH CAROLINA - Scotland and Robeson Counties -- about half of 25,000-30,000 cotton acres sprayed. Mostly H. zea in unsprayed fields; some H. virescens found. Damage from 1% to occasional field with 50% square damage. Northern and far western areas--eggs and larvae generally light. (Bacheler). TENNESSEE - Western area -- some Heliothis sp. square damage but below control levels in most cases. Some fields at border line level for controls. (Locke). Middle area--averaged 3 larvae and 2 eggs per 100 terminals. (Cagle).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - Counts per 100 cotton terminals by county June 30 to July 1: Comanche-heavy on squaring plants, 40-70 per 100 terminals; Ellis and Navarro-4-39 per 100 terminals, damage moderate to heavy on some late plants; Blackland area--up to 1 per plant; McCulloch--light to moderate in older fields; San Angelo area--5-10 per 100 terminals; Floyd and Crosby--5-8 per 100 terminals in many fields, 25-50 in some Crosby County fields; Scurry--0-30 per 100 terminals, 20% loss of pinhead squares; Glasscock, Upton, Reagan, Howard, Martin, Pecos, Reeves, Hudspeth, Culberson, and El Paso--0-8 per 100 terminals. (Neeb et al.). OKLAHOMA - Counts per 100 cotton terminals by county: Caddo--40 and Tillman--17. (Arnold).

TARNISHED PLANT BUG (Lygus lineolaris) - ARKANSAS - Clay County-nymphs up to 2 per row ft in several cotton fields week ending July 1, treatment recommended for some fields. Jefferson County-5-6 per row ft. (Wall). ALABAMA - Statewide--10-20 per 10 ft in most cotton fields. Lawrence County and northern area--up to 500 per 100 ft of row in few fields. (Scouts et al.).

BANDEDWING WHITEFLY (Trialeurodes abutilonea) - ALABAMA - Elmore-adults, nymphs, and eggs in all of 3 cotton fields. Many plants with several hundred adults on top leaves. (Thompson et al.).

## TOBACCO

## INSECTS

GREEN PEACH APHID (Myzus persicae) - FLORIDA - Suwannee County-decreased on untreated flue-cure type tobacco at Live Oak, averages of 270 per plant June 15 decreased to 145 per plant by June 29. POTATO VIRUS Y (transmitted by aphids) very scarce. (Tappan). KENTUCKY - Central and Bluegrass areas-increased on tobacco, infestations ranged from less than 4% to 48% (averaged 23.5%) in 13 fields. (Sloderbeck).

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Trousdale, Smith, and Sumner Counties -0-1,143 larvae per acre; above control level in 5 of 16 tobacco fields. (Gregory).

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Trousdale, Smith, and Sumner Counties--0-636 larvae per acre; above control level in 7 of 16 tobacco fields. (Gregory).

#### MISCELLANEOUS FIELD CROPS

#### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - NEW MEXICO - Lea County--1-5 larvae per head fed on sunflowers. (Iselin).

#### WEEDS

HYDRILLA (Hydrilla verticillata) - CALIFORNIA - New county record. Imperial County--detected in All American Canal west of Calexico by J. Taylor and D. Byrd, June 25, 1977. About 0.6 mile of canal heavily infested. Confirmed by D. Barbe. (Keffer).

# POTATOES, TOMATOES, PEPPERS

## DISEASES

SEPTORIA LEAF SPOT (Septoria lycopersici) - KANSAS - Douglas County--heavily infected 2-acre tomato field; every plant being defoliated. (Sim).

ALTERNARIA EARLY BLIGHT (Alternaria solani) - WEST VIRGINIA - Kanawha County--first of season on tomatoes July 1. (Taylor).

## INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - WISCONSIN - Larvae per 10 sweeps of potatoes: Spring Green area--0.3-2, Central Sands area-averaged 0.4, Kenosha County--3 in 1 field. (Lovett). OHIO - Hardin and Wayne Counties--heavy in potato fields. Heavy in Wayne County light traps. (Rings). DELAWARE - Kent County--lst and 2nd instars 10+ per row ft, heavy, of potatoes at Dover. (Burbutis, Kelsey).

EUROPEAN CORN BORER (Ostrinia nubilalis) - SOUTH CAROLINA - Orangeburg County-4-5% damage, moderate, in 20 acres of bell peppers. (Griffin).

GREEN PEACH APHID (Myzus persicae) - PENNSYLVANIA - Centre County-adults averaged 21 per trap July 1 and 29 per trap July 6 in potatoes at Rock Springs. (Martinka, Smilowitz).

#### BEANS AND PEAS

## INSECTS

MEXICAN BEAN BEETLE (Epilachna varivestis) - FLORIDA - Survey of Gainesville, Alachua County, northwestward into Panhandle area June 30--populations trace until at Chipley, Washington County, slightly heavier numbers found on beans. Generally noneconomic until De Funiak Springs, Walton County, pest heavy on several hundred feet of lima beans in large garden and common in garden northwest of De Funiak Springs. Marion County north to northeastern border of State and west through Holmes County--no current economic infestations, sharp decrease due to releases of the parasite Pediobius foveolatus (a eulophid wasp) at selected localities in northern area, primarily Alachua and Gadsden Counties. (Sailer). NEW YORK - Tompkins County--first of season on field beans June 29. (Willson).

PEA APHID (Acyrthosiphon pisum) - WISCONSIN - East-central and south-central areas--5-120 per sweep on peas. Calumet County-heaviest; Dodge, Manitowoc, and Sheboygan Counties--lighter. (Lovett).

TWOSPOTTED SPIDER MITE ( $\frac{\text{Tetranychus}}{20 \text{ per leaf}} \frac{\text{urticae}}{\text{on beans next to cut hay field at Kimberly June 29. (Stoltz).}$ 

#### WEEDS

PROSO MILLET (Panicum miliaceum) - WISCONSIN - Sheboygan and Dane Counties--15% or more of plant population, heavy, in pea fields. (Lovett).

#### **COLE CROPS**

## INSECTS

DIAMONDBACK MOTH (Plutella xylostella) - WISCONSIN - Rock County-infested 80% of cabbage heads in 1 field. (Lovett).

CABBAGE LOOPER (Trichoplusia ni) - NEW YORK - Suffolk County-first adults of season in blacklight trap June 28 to July 7. (Semel).

CABBAGE FLEA BEETLE (Phyllotreta cruciferae) - DELAWARE - Sussex County--adult averages of 10-40 per plant, very heavy, on crucifers in central area. (Burbutis, Kelsey).

#### HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) heavily mined 75-80 percent of leaves in 0.5 acre of pole beans and 30-50 percent of leaves in 2 acres of green onion at Waianae Valley and 25-75 percent of leaves in 15 acres of watermelon at Kahuku, Oahu. Moderate on 0.25 acre of hyotan squash and 1 acre of Manoa lettuce at Waianae Valley. GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) nymphs and adults heavy on 90 percent of leaves in 2 acres of bittermelon at Lualualei Valley, Oahu. Foliar damage light. (Nagamine, L. Nakahara). CORN PLANTHOPPER (Peregrinus maidis) heavy on sweet corn in 1 acre at Waimea Valley and 3 acres at Kilauea, Kauai; trace in 2 acres at Waianae Valley and 10 acres at Kahuku, Oahu. The predator, Tytthus mundulus (cane leafhopper egg sucker), trace at Waimea Valley and heavy (50-100 nymphs and adults per plant) at Kilauea. (Bianchi et al.).

Fruits and Nuts - CARMINE SPIDER MITE (Tetranychus cinnabarinus) moderate to heavy (50-75 percent of plants; 10-20 per sq inch) in 0.5 acre of nonbearing papaya plants at Waianae Valley. Infestations and foliar damage heavy (100 percent of leaves; 20+ per sq inch) in 0.5 acre of pole beans at same locations. (Nagamine, L. Nakahara).

### DECIDUOUS FRUITS AND NUTS

## INSECTS

REDBANDED LEAFROLLER (Argyrotaenia velutinana) - NEW YORK - Central and western areas-second adult flight underway on fruit trees. (Tette, Willson).

WESTERN CHERRY FRUIT FLY (Rhagoletis indifferens) - CALIFORNIA - Humboldt County--first larvae of season in Royal Ann cherry at Hoopa. Treatment planned. (Bejarsno).

APPLE MAGGOT (Rhagoletis pomonella) - WISCONSIN - Dodge County-first adult of season trapped. (Lovett).

APPLE APHID (Aphis pomi) - PENNSYLVANIA - Adams County--infested 90% of terminals in 3 apple orchards at Biglerville. (Hull).

PECAN NUT CASEBEARER (Acrobasis nuxvorella) - OKLAHOMA - Payne County--first generation adults active, 30 on July 6 and 103 on July 7 in 4 traps in pecan orchard. (Arnold).

# **ORNAMENTALS**

## INSECTS

HOLLYHOCK WEEVIL (<u>Apion longirostre</u>) - WEST VIRGINIA - New State record. Monongalia County--very heavy, damaged most buds and blossoms on several hollyhock plants at Morgantown June 3, 1977; most buds dropped. Collected by F. Pogge. Determined by L. Butler. (Butler).

SOFT SCALES - ALABAMA - New county records. TERRAPIN SCALE (Lecanium nigrofasciatum) in Macon County--collected on Sassafras albidum (common sassafras) at Tuskegee National Forest by L. Hyche, April 27, 1977. A SOFT SCALE (Pulvinaria acericola) in Morgan County--collected on dogwood at Decatur by C. Rutledge, May 10, 1977. (McQueen).

ERIOCOCCID SCALES - ALABAMA - New county records. Eriococcus quercus in Bullock County--collected on Quercus sp. (oak) at Perote by M.L. Williams, April 17, 1977. E. araucariae in Mobile County--collected on Araucaria heterophylla (Norfolk Island pine) at Irvington by H.B. Brackin, June 1977. Both determined by M.L. Williams. (McQueen).

TEA SCALE (Fiorinia theae) - ALABAMA - New county record. Lamar County--collected on Camellia at Vernon by T. Guthrie, May 17, 1977. Determined by M.L. Williams. (McQueen).

## FOREST AND SHADE TREES

#### INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - OREGON - Marion County--second treatment completed at Woodburn, about 1,200 pines treated; residential area, trailer park, and golf course infested. No adults trapped in 1976 known infested area. Umatilla County--

third treatment applied to ornamental pines at Hermiston, Umatilla, McNary, and Hat Rock. New county record: Benton County-R. buoliana adults in 6 of 12 pheromone traps on large tree farm in Kings Valley area, June 14-25, 1977. Collected and determined by F.P. Larson. Infested pines treated. (Larson).

SPRUCE BUDWORM (Choristoneura fumiferana) - NEW HAMPSHIRE - Coos County-90-100% defoliation, severe, evident in northwestern quadrant of Pittsburg week ending July 4. Older trees lost 2-3 years of growth, defoliation on young trees averaged 20-40% of 1977 growth. In Cedar Stream drainage, some small trees stripped of all needles. Damage in rest of area much less severe, averaged 10-20% defoliation of 1977 growth. Adults emerged from all areas except extreme northern border. Preliminary examination indicates extensive larval and pupal mortality due to parasites and diseases in heavily infested areas. (Morse et al.).

A NOCTUID MOTH (Lithophane laticinerea) - IOWA - Localized patches of severe defoliation to maple and other trees along Wapsipinicon and Cedar Rivers. New State record: Scott County--collected along Wapsipinicon River by D. Olson, May 23, 1977. New county records: Cedar--along Cedar River by K. Muller, May 25; Clinton--south of DeWitt along Wapsipinicon River by N. Goodwin, May 25; Linn--south of Waubeek along Wapsipinicon River by J. Gogan, May 26. All determined by R.W. Rings. (Lewis).

SATIN MOTH (Leucoma salicis) - WASHINGTON - Okanogan County-larvae completely defoliated 5-acre planting of quaking aspen at Oroville June 28. (Woodrow, Fisher).

LOCUST LEAFMINER (Odontota dorsalis) - KENTUCKY - Anderson and eastern Nelson Counties--adults very heavy, defoliation of black locust trees from 20% on some trees (especially young or isolated trees) to 75+% on others. Population decrease underway. (Sloderbeck). WEST VIRGINIA - Kanawha, Putnam, and Fayette Counties--50% damage on all black locust trees. (Hacker).

#### MAN AND ANIMALS

# INSECTS

HORN FLY (<u>Haematobia irritans</u>) - TEXAS - Counts per head by area June 29 to July 1: Lower Rio Grande Valley--light; lower Gulf Coast--100-500; Panhandle--250-600; Trans-Pecos--increased on cattle; Brewster and Terrell Counties--moderate on sheep. (Cocke et al.). OKLAHOMA - Counts per head on cattle by county: Noble-averaged 500, Payne--350, Pontotoc--heavy. (Arnold). FLORIDA - Alachua County--averaged 480 per head in small beef herd at Gainesville (Weidhaas); most recent count reflects influence of recent rains which caused decrease (Simon). INDIANA - Lawrence County--averaged 111 per side on 15 mixed cattle. (Williams). WISCONSIN - Counts of 50+ per side, annoyance to dairy cattle intensified due to heat. (Lovett).

FACE FLY (Musca autumnalis) - OKLAHOMA - New county records: Adair County--20-25 per head at Watts, June 16. At Keota, Haskell County, and Cowlington, Le Flore County--3-5 per head June 16. Muskogee County--3-4 per head at Haskell, July 1. Okmulgee County--2-3 per

head at Bald Hill, July 1. Collected and determined by R.E. Wright. (Arnold). INDIANA - Lawrence County--face fly averaged 5 per face on 15 mixed cattle. (Williams). WISCONSIN - Counts of 10+ per face, annoyance to dairy cattle intensified due to heat. (Loyett).

A BLACK FLY (Simulium venustum) - NEW HAMPSHIRE - Coos County-active at Pittsburg, landing/biting rates averaged 5-10 per minute on June 29. (J.F. Burger).

# FEDERAL AND STATE PROGRAMS

## DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - Sonoma County--several new sites confirmed infected at Santa Rosa and Sonoma. Napa County--previously infected site confirmed at Napa. Tree removal continued as new trees confirmed diseased. (Mote).

WHEAT STEM RUST (<u>Puccinia graminis var. tritici</u>) - COLORADO - Kit Carson, Cheyenne, Kiowa, Prowers, Yuma, and Washington Counties--infected 13 of 25 fields, mostly winter wheat with some barley. Severity 1-65 percent but crops near harvest in most cases. (Sexton).

## INSECTS

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - OHIO - Damage light to heavy in most field corn and on sweet corn. Tuscarawas County-heavily damaged 1 corn field bordering oat field, fed on 50% of leaf surface of each leaf. (Drees). NEW YORK - New county record: Suffolk--larvae collected from oats near Middle Island by M. Keller, June 22, 1977. Determined by R. Dysart. (T.L. Burger). VERMONT - New county record: Addison--larvae collected from oats near Orwell by M. Keller, June 27, 1977. Determined by R. Dysart. (T.L. Burger). NEW HAMPSHIRE - Merrimack County--3 larvae collected from margin of oat field at Concord. No other larvae despite intensive searching. No other infestations in State to date. (J.F. Burger).

GRASSHOPPERS - WASHINGTON - Spokane County--Melanoplus sanguinipes, mostly 1st and 2nd instars (unusual at this late date), economic in some rangeland areas June 30. (Jackson). IDAHO - Nez Perce County--up to 25 per sq yd in some areas on grasses, gardens, and rangelands. (Kambitsch). WISCONSIN - Pepin and Pierce Counties--averaged 4-7 per sweep of alfalfa. Dunn County--heavy. Counts 0.2-2 per sweep. Heavy on many roadsides and ditchbanks. (Lovett).

GYPSY MOTH (<u>Lymantria</u> <u>dispar</u>) - PENNSYLVANIA - Wayne County--viral wilt disease very prevalent in 5th and 6th instar larvae in areas with heavier infestations. Pike County--adult males first seen June 30. (Jackowski). Centre County--increased male flight activity and egg laying in Poe and Sugar Valleys. Refoliation underway in heavily defoliated areas. (Waldvogel).

JAPANESE BEETLE (Popillia japonica) - KENTUCKY - Northern and eastern areas--adults danaged pora, tobacco, peppers, potatoes, fruit trees, ornamentals, and vegetables; especially heavy in Boone, Kenton, and Campbell Counties. (Gregory).

MORMON CRICKET (Anabrus simplex) - NEVADA - Elko County--602 rangeland acres baited in Trout Creek area, Pinon Range. (Kail).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Lincoln County-egg hatch light to almost 100%; rain widespread in area. (Huddleston)

SCREWWORM (Cochlingia hominivorax) - Eight cases reported from continental United States June 19-25 as follows: Texas 1, Arizona 7. (Meadows). Total of 162 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 622 cases reported in Mexico south of Barrier Zone (Williams, Smith). Number of sterile flies released this period totaled 117,852,500 as follows: Texas 89,944,400, New Mexico 4,815,000, Arizona 22,103,100, California 990,000. Total of 141,943,500 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### DETECTION

NEW STATE RECORDS

#### INSECTS

HOLLYHOCK WEEVIL (Apion longirostre) - WEST VIRGINIA - Monongalia County. (p. 516).

A NOCTUID MOTH (Lithophane laticinerea) - IOWA - Scott County. (p. 517).

AN OECOPHORID MOTH (Martyrhilda canella) - VIRGINIA - Montgomery County--1 adult collected in blacklight trap near field with infestation of horsenettle at Prices Fork Research Station by T.E. Bailey, February 17, 1976. Determined by R.W. Hodges. (Smith).

NEW COUNTY RECORDS

## INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - NEW YORK - Suffolk; Vermont - Addison. (p. 518).

A CHRYSOMELID BEETLE (Cassida rubiginosa) - WEST VIRGINIA - Collected from alfalfa by county: Greenbrier--at Lewisburg by T. Gallo, May 9, 1972; Grant--at Petersburg by J.E. Weaver, May 14, 1975; Jackson--at Ripley Landing by J.E. Weaver, May 4, 1976; Mason--at Ashton by J.E. Weaver, April 28, 1977. All determined by L. Butler. Wood County--larvae fed heavily on leaves of bull thistle at Mineral Wells. Collected by N.J. Taylor, June 16, 1977. Determined by C.C. Coffman. (Hacker).

AN ERIOCOCCID SCALE (<u>Eriococcus</u> <u>araucariae</u>) - ALABAMA - Mobile. (p. 516).

AN ERIOCOCCID SCALE (<u>Eriococcus</u> <u>quercus</u>) - ALABAMA - Bullock. (p. 516).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - OREGON - Benton. (p. 517).

FACE FLY (Musca autumnalis) - OKLAHOMA - Adair, Haskell, Le Flore, Muskogee, Okmulgee. (p. 517-518).

A NOCTUID MOTH (<u>Lithophane</u> <u>laticinerea</u>) - IOWA - Cedar, Clinton, Linn. (p. 517).

A SOFT SCALE (Pulvinaria acericola) - ALABAMA - Morgan. (p. 516).

TEA SCALE (Fiorinia theae) - ALABAMA - Lamar. (p. 516).

TERRAPIN SCALE (<u>Lecanium</u> <u>nigrofasciatum</u>) - ALABAMA - Macon. (p. 516).

#### WEEDS

HYDRILLA (Hydrilla verticillata) - CALIFORNIA - Imperial. (p. 513).

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LIGHT TRAP COLLECTIONS	ARKANSAS (County)  Jefferson 5/30-7/6  CALIFORNIA (Counties)  Bellota 6/28  Stockton 6/30  68	FLORIDA Gainesville 6/30-7/6	INDIANA (Counties) Randolph 6/24-30 Tippecanoe 6/24-30	KENTUCKY Lexington 6/30-7/6	MISSISSIPPI Stoneville 6/1-7 68	NORTH DAKOTA Bismarck 6/27, 29 Bottineau 6/29	OHIO (County) Wayne 7/2-8	TEXAS College Station 7/1-7	WEST VIRGINIA (Counties) Monroe 6/27 Randolph 6/29	WISCONSIN Hancock 6/30-7/6 Mazomanie 6/30-7/6

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

Monilinia fructigena (Aderh. & a fungus Ruhl.) Honey Det. H.T. Eng Ruhl.) Honey Det. H.T. Eng an armored scale Det. R. Kunishi a tortricid moth Det. D.M. Weisman Cryptophlebia ombrodelta (Lower) an olethreutid moth Det. D.M. Weisman Det. D.M. Whitehead	Life Stage imperfect adult larval all	Host on cherries from baggage on ginger roots from cargo on geranium plant from baggage in senna pods from baggage in mangos from baggage	Probable Origin Italy Fiji Greece Hawaii	Port of Entry Kennedy Airport Honolulu Kennedy Airport Hawaii	USA USA CA CA
Gryllotalpa africana Palisot de African mole cricket Beauvois Det. D.M. Pike	adult	in aircraft holds	Asia	Seattle	USA
Sirex noctilio Fabricius a horntail Det. D.R. Smith	adult	in crates of machinery	Germany	Charleston	NC
Heterodera avenae Woll. oat cyst nematode Det. W. Friedman	cyst	with soil on leeks from ship stores	Germany	Jacksonville	

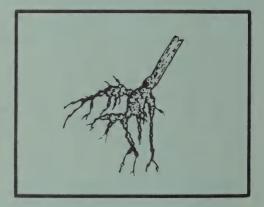


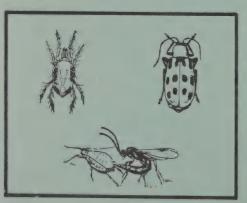
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Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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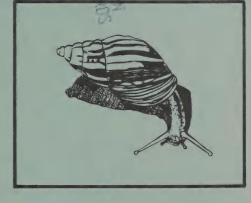
VOL. 2 NO. 29 5B823

July 22, 1977

Cooperative

# PLANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

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Hyattsville, Maryland 20782

# **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

## Current Conditions

ARMYWORM larvae 12 per sq ft in south-central Kansas. (p. 525).

GREENBUG 200 or more per sorghum plant in parts of north-central Texas, northwestern and central Oklahoma, and east-central and southwestern Kansas. (p. 526).

Second generation of EUROPEAN CORN BORER could be important on corn in Minnesota. Second adult flight heavier than expected in Wisconsin. (p. 527-528).

FALL ARMYWORM heavy on corn and sorghum in southeastern and central Alabama and northern Florida. (p. 528-529).

Controls difficult with LESSER CORNSTALK BORER on soybeans in central and southern Alabama. (p. 532).

## Detection

New NOCTUID MOTH for the Western Hemisphere in Hawaii. (p. 548).

First ALFALFA CROWN WART in northeastern United States in Pennsylvania. (p. 531).

New State records include an ICHNEUMONID WASP in Kentucky (p. 542). an ERIOPHYID MITE in Hawaii (p. 548), a RHIZOPHAGID BEETLE and a SCARAB in Maryland (p. 549).

For new county and independent city records, see page 549.

New host record for CHRYSANTHEMUM FOLIAR NEMATODE in California. (p. 537).

Reports in this issue are for the week ending July 15 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

ARMYWORM (Pseudaletia unipuncta) - TEXAS - Hale County--adults 20-60 per trap per night July 7. (Cronholm). KANSAS - Larvae on crabgrass in parts of corn field (milk stage) by county: Kiowa--larvae newly hatched to 0.5 inch long averaged 12 per sq ft; Pratt--some larvae up to 0.75 inch long. No larvae on corn yet; some treating. (Salsbury). SOUTH DAKOTA - Statewide--adult flights heavy in June and early July. Wessington Springs, Jerauld County, and Brookings County--larvae, 0.25-0.50 inch long, detected in gardens. (Walgenbach).

MINNESOTA - Northwest district--armyworm still heavy on barley week ending July 8. Larval averages per sq ft by county: Pennington and Lake--5-10, one field in Pennington had 12 larvae with 75% damage; eastern half of Polk, Norman, and Marshall--2-10; Clearwater--traces; Hubbard and Becker--spotty, fewer than 5 per sq ft. West-central district--fewer than 1 per sq ft of barley and oats. Current infestations decreased on small grains. Late larval instars and some pupae indicated peak feeding period ended. Northwest district--larvae averaged 2 per sq ft, especially in Roseau, Pennington, Red Lake, Polk, and Norman Counties. West-central district--fewer than 1 per sq ft. (Sreenivasam).

SOUTH CAROLINA - Newberry County--armyworm heavy on millet and milo. Very heavy on 50 acres of corn. (Dunkle, Horton).

PENNSYLVANIA - Centre County--50% infestations on knee-high, no-till corn. (Gesell).

CORN EARWORM (Heliothis zea) - TEXAS - Counts by area July 6-8: Tom Green and Runnels Counties--decreased, 0-1 per corn ear; northeastern Panhandle--50% of corn infested (Bohmfalk, Patrick); Blacklands--infested 2-8% of sorghum heads (Hoelscher). OKLAHOMA - Counts by county: Garvin--infested average of 80% of ears in sweet corn and 70% in field corn, Muskogee--50% of ears, Pontotoc--heavy, and Nowata--moderate to heavy. (Arnold).

ARKANSAS - Washington County--corn earworm larvae in 24 of 100 ears in experimental corn field and 5 larvae in 200 heads in experimental sorghum field. (Mayse). MISSISSIPPI - Heavy on field corn ears in soft dough stage. Sunflower County--100% of ears had up to 5 larvae per ear. Leflore County--96% of ears sampled had up to four 5th instar larvae. (Anderson). KENTUCKY - Christian County--larvae, early to middle instars, in average of 5% (ranged 0-12%) of ears in 5 corn fields. (Sloderbeck).

FLORIDA - Corn earworm and FALL ARMYWORM (Spodoptera frugiperda) by county: Alachua--completely destroyed 2 acres of untreated sweet corn planted April 25 at Gainesville; late instar larvae averaged 2 H. zea and 2-3 S. frugiperda per ear (Mitchell); St. Johns--heavily infested late-planted field corn at Hastings, most ears completely destroyed in at least 5 fields (Copeland); Jackson--mostly S. frugiperda larvae averaged 3-4 per head in more mature sorghum at Greenwood, both species and some BEET ARMYWORM (S. exigua) heaviest and earliest on peanuts in recent years

(Tappan). Heavy Heliothis zea flight that began 7 days ago continues. Gadsden County--Ist and 2nd instar larvae on soybeans at Quincy. (Herzog).

CORN LEAF APHID (Rhopalosiphum maidis) - TEXAS - Counts on sorghum by county July 5-8: Hale--moderate to heavy on preboot; Crosby County and High Plains area--increased; moderate to heavy; Hutchinson--very heavy on 12-inch plants. (Byrd et al.). OKLAHOMA - Averages per sorghum plant by county: Jackson--heavy, Muskogee--25, Garvin--20, Pottawatomie--15. Garvin County--75-200 per corn plant. (Arnold). KANSAS - Riley, Marshall, Washington, Clay, Republic, Lyon, Wabaunsee, Osage, and Ellis Counties--still light in sorghum whorls increasingly in Ellis County. (Harvey). WISCONSIN - Generally light. Fond du Lac County--200+ on 6% of sweet corn plants. (Lovett).

GREENBUG (Schizaphis graminum) - IDAHO - Twin Falls County-destroyed 15-acre barley (3 inches tall) field near Twin Falls July 7 and 10-acre oat (6 inches tall) field near Buhl July 13. (Stoltz). TEXAS - Counts on sorghum by county July 5-11: Fisher and Jones--damage heavy; Fisher, Jones, and Knox Counties, and High Plains (economic) area--increased; Crosby--150-200 per plant; Hale and southern Swisher--light to moderate in some fields. (Leser et al.). OKLAHOMA - Averages per sorghum plant in 1 field each, by county: Payne--405 at Cushing on 24-inch sorghum; Texas--200. (Arnold).

KANSAS - Finney, Ellis, Riley, Marshall, Republic, Washington, Clay, Wabaunsee, Lyon, and Chase Counties--greenbug generally increased on sorghum, heaviest on early planted sorghum; up to 300 per plant on heading sorghum in Lyon County and 500 per plant in Finney County. Clay, Washington, Republic, Marshall, Riley, and Lyon Counties--most colonies on 2 to 24-inch sorghum consisted of winged greenbugs and a few immatures indicating some recent flight activity, winged greenbugs possibly from earlier planted sorghum. (Bell et al.). Kiowa County--still light on sorghum. (Salsbury).

MISSOURI - Percent of plants with greenbug infestations in 2 corn pest management areas ranged 22-100% (averaged 93%). Lafayette County--6-81% (averaged 32%) of plants infested with light numbers in 5 fields. Buchanan County--0-69% (averaged 21%) of plants with light to moderate numbers in 5 fields. (Munson). NEBRASKA - Eastern area still increased slowly on sorghum July 4. York County--averaged 80 per plant, counts doubled from last period. (Raun, Monke).

SOUTH DAKOTA - Winner, Tripp County, and Wagner, Charles Mix County--greenbug generally present but noneconomic in most sorghum fields. South-central area--buildup slower than in previous years. Northern and northeastern areas--early infestations on seedling sorghum. (Walgenbach). MINNESOTA - Hubbard, Becker, Grant, Douglas, Stevens, Chippewa, Lac Qui Parle, Sibley, Le Sueur, and Redwood Counties--some sorghum fields needed replanting week ending July 8. West-central district--counts averaged 40 per linear ft of row. Northwest district--averaged 2 per linear ft for first time. (Sreenivasam).

POTATO LEAFHOPPER (Empoasca fabae) - OHIO - Wayne County--180 per sweep of alfalfa July 6. (Nelson, Flessel). Scioto County--currently still above economic threshold at 2.4 per sweep in uncut alfalfa fields. (Drees). WISCONSIN - Counts variable depending on alfalfa regrowth: Trempealeau County--5-10 per sweep; south-central, southwestern, west-central, and central areas--0-5 per sweep in most fields. Counts on vegetables by county: Central Sands area and Dunn and St. Croix Counties--1 per 20 sweeps to 1 per sweep of snap beans, light to moderate; Trempealeau--1 per sweep of lima beans; Dane and St. Croix--1 per sweep of beets. (Lovett).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Tillman County--heavy in 8 acres of NCW 20 alfalfa, but light on common and Kansa alfalfa. Jackson County--heavy on common and Arc alfalfa. (Arnold).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Suwannee County-population still stable with 99% of untreated tobacco plants damaged at Live Oak. (Tappan). OHIO - Lawrence County-larvae, 25-30 mm, very light on 8 to 24-inch tobacco. (Drees).

# CORN, SORGHUM, SUGARCANE

## DISEASES

HOLCUS SPOT (Pseudomonas syringae) - KANSAS - Jackson County-affected 10% of corn plants in  $\overline{1}$  field. (Sim).

COMMON MAIZE RUST (Puccinia sorghi) - MISSOURI - Macon County-light on 1-2% of corn at 1 site. (Foudin). KANSAS - Still most prevalent corn disease in northeastern and north-central areas. Plants infected by county: Ottawa--70%, Republic--80%, Jackson-trace, and Shawnee--100%. (Sim).

COMMON SMUT (Ustilago maydis) - MISSOURI - Shelby, Randolph, and Moniteau Counties--trace, less than 0.1%, on corn in late silk at 1 site each. Warmer weather than normal with sporadic late afternoon showers. (Foudin). IOWA - Percent of corn plants infected (and severity) by county: Crawford 70 (trace to 50) and Monona 2 (trace). (Williams).

MAIZE DWARF MOSAIC VIRUS - KANSAS - Eastern area--became evident on sorghum as GREENBUG (Schizaphis graminum) activity increased. Clay, Nemaha, Wabaunsee, Shawnee, and Douglas Counties--red leaf stage obvious, from trace amounts up to 20% of plants in fields surveyed. Disease especially severe in 1 Riley County field where up to 10% of plants may die from this virus. (Sim).

## INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - York, Fillmore, Hall, Hamilton, Buffalo, Dawson, and Merrick Counties and northeast district--first generation larvae pupated July 1-5. (Raun et al.). SOUTH DAKOTA - Second generation adults appeared, only scattered light infestations to date. (Walgenbach). MINNESOTA - "Shotholes" in corn still very evident week ending July 8. Maximum infestations by county, 1 field each: Dakota-48%, Wabasha--52%, and Rock 60%. Light trap catches still light

Number of corn plants infested by European corn borer (and larvae) per 100 plants by district: Northwest 1 (3) on corn 55 inches tall, west-central 6 (14) on 60 inches, south-central 6 (6) on 98 inches, and southeast 14 (23) on 83 inches. Mostly 1st to 3rd instars. Current infestations in some fields still moderate: Isanti County--32% infestation with 48 borers per 100 plants in 1 field and Olmsted County--60% infestation with 120 borers per 100 plants in 1 field. Adults increased in light traps last 7 days. Eggs and 1st instar larvae of second generation appeared. All indications point to successful second generation which could be important in 1977. Number of infested plants (and larvae) per 100 plants by district: Northwest 4 (9) on corn 52 inches tall, west-central 6 (12) on 80 inches, central 13 (4) on 72 inches, east-central 8 (10) on 86 inches, southwest 4 (8) on 88 inches, south-central 11 (4) on 88 inches, and southeast 14 (15) on 106 inches. (Sreenivasam).

MISSOURI - European corn borer egg masses of second generation ranged 0-20 and 0-28 (averaged 2.9 and 5.3) per 100 plants in 2 corn pest management areas. Atchison County--0-31 (averaged 8.4) egg masses per 100 plants in 10 fields. Adults active in all areas. (Munson). KENTUCKY - Woodford County--pupation nearly 80% in 1 corn field by July 12. (Sloderbeck). INDIANA - West-central area--second flight of season began July 6 in blacklight traps. (Judy). WISCONSIN - Second adult flight began late last period; trap catches heavier than expected. Crawford County--third flight possible in advanced site such as Prairie du Chien if hot weather continues. Most larvae in corn fields in last instar and ready to pupate. (Lovett).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - OKLAHOMA - Texas County--ranged half-grown larvae to adult, 5 adults in light trap July 13, and 15 on July 14. Garvin County--second generation larvae (1st and 2nd instar) averaged less than 1% in corn, few adults still active in fields, no eggs found. (Arnold). KANSAS - Kiowa County--some second generation eggs hatched, adult flights heavy near Haviland where 1,856 adults in blacklight trap July 11. (Salsbury). At Pratt, Pratt County, and Elkhart, Morton County--adults increased in light traps. (Wilson et al.).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - TEXAS - Dallam County--hatched July 8, eggs on 5-50% of corn plants. (Patrick). OKLAHOMA - Cimarron County--egg masses averaged 1 per 5 plants in corn field at Felt, hatch underway. Field to be treated. (Arnold). KANSAS - At Elkhart, Morton County, Hugoton, Stevens County, and Colby, Thomas County--decreased in blacklight traps (Rains et al.); flights apparently peaked first week of July. (Bell). NEBRASKA - Dundy and Hamilton Counties--first adults of season from light traps June 30 and July 1, respectively. Dundy County--adults 2,000+ per night in trap July 4-5. Southwest district--some eggs laid in Dundy County. (Campbell et al.).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Barbour, Geneva, Perry, and other southern counties—controls impractical with 1-10 larvae inside shucks and ears in many irrigated corn fields. (Ivey et al.). Montgomery County—larvae heavy, 1-2 per forage sorghum stalk; damaged 35-40% of all plants in LeGrand and Snowdown Communities. (Jones). FLORIDA - Gadsden and Jackson

Counties—larvae of this species, YELLOWSTRIPED ARMYWORM (S. ornithogalli), and CORN EARWORM (Heliothis zea) heavily damaged corn already weakened by drought. Jackson County—mainly fall armyworm averaged 8-9 larvae per stalk on 15-20 acres of untreated sorghum at Greenwood. (Tappan). Alachua County—fall armyworm completely destroyed 20 acres of untreated field corn planted in early May at Gainesville (Mitchell, Hines); completely destroying young field corn planted in June at Gainesville, 2 or more large larvae in each whorl. (Mitchell).

CORN ROOTWORMS (Diabrotica spp.) - TEXAS - WESTERN CORN ROOTWORM (D. virgifera) adults on corn by county July 7-8: Hale--1 per plant in I northwest area field; Hutchinson--4-5 per ear, 20% silk damage. (Cronholm, Patrick). KANSAS - D. virgifera damaged roots of untreated, first year corn in Ford County and treated corn in Thomas and Stevens Counties. (Salsbury, Gates). MISSOURI - D. virgifera ranged 0-6.6 and 0.2-4.1 (averaged 0.1 and 1.0) per plant in 2 corn pest management areas. Atchison County--ranged 0-9 (averaged 4.0) per plant in 10 fields. (Munson).

NEBRASKA - Dawson, Hall, Merrick, and York Counties--Diabrotica spp. adult emergence well underway in corn and leaf damage begun July 1-5. Beetles 0-7 (averaged less than 1) per plant. (Raun, Monke). MINNESOTA - Diabrotica sp. adults emerged. Ranged trace to 2 per corn plant in all reporting districts except northwest. Majority NORTHERN CORN ROOTWORM (D. longicornis). More than 90% of corn pollinated; adult emergence will peak in 7 days. (Sreenivasam). WISCONSIN - Diabrotica spp. population collapsed, rarely up to 1 per plant. Probably due to high winter kill of eggs, intensive controls, and late planting based on degree-days. (Lovett).

KENTUCKY - D. longicornis populations seem light. Woodford County-adults averaged 1.7 per plant in 1 corn field. (Sloderbeck). ILLINOIS - New county records for D. virgifera. Monroe County-Collected on corn near Columbia by A. Obst, July 1, 1977. Cumberland County--collected 4 miles west of Greenup by L.R. Paszkiewicz, July 5. Both determined by J. Bouseman. (Black). OHIO - Auglaize County--first D. virgifera adult of season on corn. (Casey). MICHIGAN - Kalamazoo County--D. longicornis adults heavy on corn July 5; Clinton County--emergence began July 6. (Love, Russell).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - Marshall County--commonly destroyed 15-150 ft of sorghum bordering wheat between Waterville and Marysville; Washington, Clay, and Riley Counties--similar losses common between Linn and Clay Center and between Clay Center and Leonardville. Immatures of second generation, up to 10 per plant, on sorghum in some fields; plants shorter than 8 inches still being destroyed. (Bell, Ramoska). Nemaha County--some heavy infestations on sorghum north of Centralia near U.S. Highway 36. (Sim).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Counts on sorghum by county July 6-8: South-central area-very heavy; Hill and Johnson-up to 50 per head; Blacklands area-heavy; Tom Green and Runnels--up to 5 per head in isolated fields. (Hoelscher et al.). OKLAHOMA - Garvin and Grady Counties--35 and 20 adults, respectively, emerged from 25-head sample of Johnsongrass July 6-7. Muskogee County--adults averaged 2 per 10 heads of blooming sorghum. (Arnold). FLORIDA - Jackson County--adults averaged about 10-15 per sorghum head, heads 4-5 inches out of boot, in 15-20 acres of untreated plants at Greenwood. (Tappan).

#### SMALL GRAINS

Adequate topsoil moisture and high temperatures June 29 to July 12 favored small grain development in Upper Great Plains. Harvesting spring-planted small grains commenced in the Dakota's and Minnesota, 14-21 days ahead of normal. (Roelfs, Long).

## DISEASES

WHEAT LEAF RUST (Puccinia recondita) still light to moderate June 29 to July 12 in northern hard red spring wheat fields and will cause minimal losses because of advanced crop maturity. On many older susceptible spring wheat varieties (i.e. Thatcher) 60% terminal severities recorded at Rosemount, MINNESOTA, experiment station. In VIRGINIA (Saunders) and COLORADO (Scholten) wheat fields, 30% severities on winter wheat in soft dough stage. On commercial rye, 10% severities recorded in Virginia (Saunders), MICHIGAN (Berrier), and Minnesota (Roelfs, Long).

NORTH DAKOTA - Cass, Traill, Walsh, Bottineau, and Steele Counties--wheat leaf rust trace on hard red spring wheat. (Jons).

OAT CROWN RUST (Puccinia coronata) development favored by wet weather June 29 to July 12 in the DAKOTA'S, MINNESOTA, and WISCONSIN but because of crop maturity, losses will be minimal. Severities trace to 40% on commercial cultivars at Rosemount, Minnesota. Very heavy in 1977 in St. Paul campus buckthorn nursery and spread very rapidly to adjacent field plots. (Roelfs, Long).

BARLEY LEAF RUST (Puccinia hordei) severities of 20% on barley June 29 to July 12 in  $\overline{\text{VIRGINIA}}$  fields (Callahan) and MINNESOTA nurseries. (Roelfs, Long).

EYESPOT (Pyrenophora trichostoma) - NORTH DAKOTA - Cass, Traill, Grand Forks, Walsh, Pembina, Cavalier, Rolette, Bottineau, Renville, Burke, Divide, Williams, Mountrail, Ward, McHenry, Pierce, Benson, Ramsey, Nelson, Steele, and Barnes Counties-infected 100% of hard red spring and durum wheat plants in fields surveyed. Severities on hard red spring wheat ranged from light (1-2%) on flag leaves to heavy (50%) on lower leaves. Severities on durum wheat from very light (1%) on flag leaves to moderate (25%) on lower leaves. (Jons).

LOOSE SMUT (<u>Ustilago nuda</u>) - NORTH DAKOTA - Percent of durum wheat plants infected by county: Bottineau--1-3, Renville--1-3, Burke--1-3, Mountrail--2, Ward--1-3, Ramsey--3, Nelson--2. Percent of hard red spring wheat plants infected by county: Walsh--2, Pembina--1, McHenry--1. (Jons).

## INSECTS

HESSIAN FLY (Mayetiola destructor) - OKLAHOMA - Infested wheat stems by county: Payne  $\frac{2\%}{2}$ ; Pawnee--2 and 26%; Kay--2, 2, and 6%; Noble--2 and 10%; Craig--2, 2, and 2%; Washington--22%; Mayes--2%; Ottawa 4%; Tulsa--2 and 2%; Seminole--2%; McClain 8%, Cleveland 2%; Lincoln--12%; Creek--2 and 2%; Hughes--2%; Okfuskee--2, 2, and 2%; Carter--4 and 4%; and Stephens--2, 2, and 2%. Infested 63 (18.5%) of 340 fields surveyed. Statewide average infestations appear lighter in 1977 than in 1976. (Arnold).

# TURF, PASTURES, RANGELAND

# INSECTS

HAIRY CHINCH BUG (Blissus leucopterus hirtus) - MARYLAND - Talbot County--heavily infested 14 acres of zoysia lawn; adults 70 per sq ft. (Hellman, Pinto).

# FORAGE LEGUMES

# DISEASES

ALFALFA CROWN WART (Physoderma alfalfae) - First find in north-eastern United States. PENNSYLVANIA - New State record. Washington County--very localized infections first noted in 3 alfalfa fields within 5 mile radius near Greensburg, May 11, 1977. Affected up to 20% of plants examined in low spots; galls 1-6 per plant. Symptoms and chlamydospores observed and determined by K. Leath. Fields not irrigated nor connected. (Leath).

ALFALFA RUST (Uromyces striatus var. medicaginis) - KANSAS - First of season on alfalfa in State; trace amounts in 1 Clay County field. (Sim).

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Still favored by hot temperatures and high humidity. Some defoliation in all alfalfa fields surveyed; plants infected by county: Clay-80%, Ottawa-100%, Cloud-100%, Jewell-70%, Washington-80%, and Marshall-100%. (Sim).

## INSECTS

ALFALFA WEEVIL (<u>Hypera postica</u>) - CALIFORNIA - Siskiyou County--larvae heavy, 50+ per sweep in 1 forage legume field at Tulelake. (Horn). KANSAS - Chase County--3rd and 4th instars averaged 3 per 10 sweeps of 18-inch alfalfa in 1 field. (Bell).

GARDEN WEBWORM (Loxostege rantalis) - OKLAHOMA - Averages per 10 sweeps of alfalfa by county: Alfalfa-heavy, Tillman--12, Jackson--3, Greer--9, and Muskogee--1 per plant. Washita and Caddo Counties-ranged light to moderate. (Arnold). KANSAS - Osage County--80% defoliation of blooming alfalfa, most larvae pupated, 14% of terminals still infested with larvae; Lyon and Chase Counties-terminal infestations 3-14% on 18-inch blooming alfalfa. (Bell). Pawnee County--larvae infested 30% of alfalfa terminals in 1 field. (Salsbury).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - Statewide-decreased on alfalfa in southern one-third, averaged 0.5-2 per 10 sweeps in most fields; Green Lake, Winnebago, and Fond du Lac-slightly heavier. Parasitism up to 50% in some fields. (Lovett).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Averages per 10 sweeps of alfalfa by county: Tillman--17, Jackson--7, and Greer--2. (Arnold). ARKANSAS - Washington County--nymphs 50 and adults 30 per 10 sweeps of alfalfa. (Mayse).

PEA APHID (Acyrthosiphon pisum) - WISCONSIN - Southwestern, south-central, central, west-central, and northwestern areas-3-45 per sweep of alfalfa. Field parasitism heavy in many cases. Green Lake, Winnebago, and Fond du Lac Counties--2-55 aphids per sweep. (Lovett).

GRASSHOPPERS - WISCONSIN - Northwestern and west-central counties-2-10 per sweep of alfalfa in light soils. Southwestern, south-central, and central counties--somewhat lighter. Northern counties--limited acreage treated. (Lovett).

#### SOYBEANS

## DISEASES

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - MISSOURI - Moniteau and Shelby Counties--infected  $\overline{1-2}$  leaves on 3-5% of soybeans at 1 site each. (Foudin).

PHYTOPHTHORA ROOT ROT (Phytophthora megasperma var. sojae) - KANSAS - Riley County--found in 1 soybean field. Inoculation tests indicate race 4 of the fungus. (Sim).

CHARCOAL ROT (Macrophomina phaseolina) - MISSOURI - Monroe County-first of season on soybeans, infection light. Field under severe drought, only 1 substantial rain 8 days before symptoms appeared, some herbicide damage. (Foudin). KANSAS - First of season on soybeans in State, trace in Riley County. (Sim).

STEM CANKER (Diaporthe phaseolorum var. caulivora) - KANSAS - First of season on soybeans in State, trace in Riley County. (Sim).

# INSECTS

BEET ARMYWORM (Spodoptera exigua) - MISSISSIPPI - Sunflower County--damaged 50 acres of seedling soybeans, larvae averaged 2.5 per foot of row. (Anderson). SOUTH CAROLINA - Beaufort County-heavy in 75 acres of soybeans. (Queener, Horton). Calhoun County-several moderate to heavy infestations on young soybeans. Controls effective in several cases. (Bull et al.).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Averages per 3 row ft of soybeans by county: Muskogee and Le Flore--1.1. (Arnold). KENTUCKY - Christian County--larvae 3.6-9.4 (averaged 6.1) per 10 sweeps in 4 soybean fields. Caldwell County--2.2-7.4 (averaged 3.7) in 4 fields. Defoliation 5% or less on late growth to bloom stage soybeans. (Sloderbeck).

A NOCTUID MOTH (Cirphis unipuncta) - SOUTH CAROLINA - Florence County--completely defoliated 5 acres of soybeans. (Griffith).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Southern and central areas-damaged thousands of acres of soybean fields from cracking growth stage to plants 18-30 inches tall. Control practically impossible. Many fields with 50-85% of plant affected. (Alsobrook et al.). SOUTH CAROLINA - Beaufort County--heavy in 75 acres of soybeans. (Queener, Horton).

GARDEN WEBWORM (Loxostege rantalis) - KANSAS - Anderson County-destroyed about 50 of 100 acres of 5-inch soybeans on farm; larvae migrated to soybeans from heavily infested pigweed treated with herbicide. (Hilbert). Lyon County-up to 20% defoliation (100% along field borders) near Miller and Admire. (Bell).

MEXICAN BEAN BEETLE (Epilachna varivestis) - MARYLAND - Kent, Cecil, and Queen Annes Counties--moderate populations with soybean defoliation up to 20% in most heavily infested areas, light populations elsewhere. Pediobius foveolatus (a eulophid wasp) released aerially (50,000 females over 40 sq mile area) for control in Somerset County; over 150,000 parasites conventionally released earlier on 150 farms in 8 counties. (Hellman, Pinto).

GRASSHOPPERS - MISSISSIPPI - Coahoma County-heavy defoliation around edges of fields on 1,000 acres of soybeans. (Lewis).

#### **PEANUTS**

# INSECTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Comanche County--infested up to 55% of several peanut fields July 8. (Moore). ALABAMA - Southeastern area--heaviest and most damaging population recorded of past 30-40 years continued in all peanut fields examined throughout the 200,000 acres of peanuts covering 9 counties. (Walton et al.). SOUTH CAROLINA - Hampton County--infested 20-30% of 1 peanut field. Peanuts starting to peg. (Walker).

BEET ARMYWORM (Spodoptera exigua) - ALABAMA - Geneva County-economic population of this species and other leaf feeders wide-spread and damaging to 20,000+ acres of peanuts. Houston County-damaging populations with controls applied. (Reynolds, Mathews).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Geneva County-heavy and damaging along with other insects on 80-acre planting of peanuts. Pike County-general and damaging in many fields. (Reynolds, McLain).

TOBACCO THRIPS (Frankliniella fusca) - FLORIDA - Jackson County--2-14 per bud in untreated peanut checks, heavier on younger plants at Greenwood. (Tappan).

#### COTTON

# INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county July 5-11: Cameron 0-21 adults and 0-56 punctured squares per 100 plants at La Feria, Santa Rosa, and Harlingen; Hidalgo-0-14 punctured squares per 100 plants at Elsa; Willacy-0-46 adults and 0-43 punctured squares per 100 plants; Milam--25-60% punctured squares at Buckholts River, 4-5% punctured squares in most fields; Bell--up to 50% damaged squares; Ellis and Navarro-20-60% punctured squares in untreated fields; Collin and Hunt-4-25% punctured squares in favorable fields; Kent--8-10% damaged squares in some fields; Rolling Plains--5-10% damaged squares,

squares one-third grown; Coleman--5-10% damaged squares by boll weevil in some fields; Mitchell and Scurry--2.6 adults per trap per 7 days; Kent--damaged squares 0-18% in control zone, 0-40% elsewhere; Stonewall--3-38% damaged squares; and High Plains area--infested fields 12% in control zone, 70% outside of zone. (Buxkemper et al.). OKLAHOMA - Adults in pheromone traps this period by county: Greer--51 adults in 14 traps, Tillman--39 in 8, Harmon-2 in 24, Kiowa--1 in 37, and Jackson--0 in 16. Punctured squares by county: Above counties--0-16% (averaged 4%), Caddo--averaged 20% in few fields, and Garvin--light to moderate. (Arnold).

ARKANSAS - Jefferson County--boll weevil punctured squares 2 per row ft in 2 cotton fields, treatment applied. (Wall). North-eastern area--weevils increased but no fields at treatment level. (Kimbrough). MISSISSIPPI - Still light with no problem spots. Adults in grandlure traps by county: Franklin--3 in 1 trap, Leake--11 in 12, and Webster--1 in 2. (Anderson). ALABAMA - Statewide-first adult emergence still light over 95+ percent of 450,000 cotton acres. Monroe, Escambia, and Marengo Counties--25-35% squares damaged in 2,000-3,000 acres. Second field generation expected July 20-27. (Davis et al.). GEORGIA - Counts in pheromone traps by county week ending July 8: Dooly--8 and Crisp--2. Southcentral area--above economic thresholds in several cotton fields. (Gray et al.).

BOLLWORMS (Heliothis spp.) - CALIFORNIA - Fresno County--3rd instar BOLLWORM (H. zea) larvae in cotton bolls at Clovis. (Dunnegan). TEXAS - BOLLWORM (H. zea) and TOBACCO BUDWORM (H. virescens) on cotton by county July 5-8: Cameron--0-77 eggs, 0-27 Tarvae, and 0-22 damaged squares per 100 plants at La Feria, Rio Hondo, Harlingen, and Brownsville; Hidalgo--0-37 eggs, 0-8 larvae, and 0-15 damaged squares per 100 plants at Elsa, Weslaco, and Alamo; Willacy--0-53 eggs, 0-6 larvae, 0-23 damaged squares per 100 plants at Los Coyotes, Lyford, and San Perlita; south-central area--eggs laid in few fields, larvae increased, 0-80% H. virescens; Williamson and Milam--15-100 eggs and 0-75 larvae; Hill and Johnson Counties--egg laying increased, 80 eggs per 100 terminals in 1 field; Blacklands area--egg laying increased; Ellis and Navarro--up to 23% damaged squares; Collin and Hunt--8-18 eggs per 100 plants, Tom Green and Runnels--eggs light in some areas, H. zea common in light trap, 2 males to 1 female; El Paso Valley--0-2% infestations in most fields, 3-4% in few. H. zea per trap per night by county: Crosby 1 (with 0.33-0.55 H. virescens), Castro 2-4, Hale 4, Swisher 4-30. (Cocke et al.).

OKLAHOMA - Washita County--Heliothis spp. damaged squares averaged 60% in 4 fields of cotton in 1 area, treatments applied. Jackson, Harmon, Tillman, Greer, and Kiowa Counties--eggs 0-15 (averaged 4) and larvae 0-9 (averaged 2.5) per 100 terminals and damaged squares 1-11% (averaged 2%). (Arnold). ARKANSAS - Southeastern area--H. zea and H. virescens decreased on cotton. Infestations very spotty. Generally averaged about 3 eggs and 3 larvae per 56 row ft. Ashley County--H. virescens larvae outnumbered H. zea larvae in some fields. (Wall).

MISSISSIPPI - Statewide--Heliothis spp. eggs and larvae decreased on cotton while localized areas still had problems. Reduced adult numbers. Delta counties began to pick up second generation eggs: Sunflower--35% eggs on 2,000 acres, Sharkey--20% on 600 acres, and Carroll--very scarce on 1,500 acres. Larvae by county: Copiah--4% on 1,100 acres, Quitman--2% on 2,000, Sharkey--3% on 600, and Sunflower--3% on 2,000. Larvae in northern counties: Alcorn--3% on 200 acres, Benton--3% on 3,500, Itawamba--4% on 1,500, Lee--2% on 800, Marshall--2% on 5,000, Pontotoc--3% on 100, Tallahatchie--3% on 2,000, and Tippah--1% on 2,100. Larvae in central and southern counties: Adams--6% on 2,000 acres, Franklin--2% on 200, Attala--1% on 3,700, Holmes--3% on 500, Leake--9% on 1,670, Madison--5-10% on 2,300, and Montgomery--1% on 670. (Anderson).

ALABAMA - Heliothis spp. adult emergence and egg laying increased 10-50 times in last 10-20 days. Southern and central areas—10-100 eggs and larvae per 100 stalks in many fields; northern area—fewer. Adults 95+% H. zea. More adults per acre than in past years and fewer host plants in present extreme drought led to more eggs laid on cotton plants. First time in 42 years of survey, infestations economic in many cotton field before controls applied for BOLL WEEVIL (Anthonomus grandis). (McQueen). GEORGIA - Southern area—Heliothis spp. adult flight in progress week of July 4 and egg counts increased substantially. Adults on "sugar line" on nights of July 5 and 7, respectively, 78 and 62 H. virescens, and 307 and 113 H. zea. H. virescens adults trapped by county week ending July 8: Dooly—10, Crisp—12, Turner—11, and Tift—12. (Emery, Lambert).

SOUTH CAROLINA - Statewide-Heliothis spp. adults increased in light traps and in cotton fields. Chester County-2 adults in 1 trap on July 11, 35 on July 12, 200+ on July 13-14. Chester, York, and Union Counties-H. zea heavy in cotton fields. Calhoun County-200+ eggs per 100 plants. Eggs increased significantly in most areas last 4-7 days. (Douglass et al.). Eggs per 100 plants by county: Sumter 100, and Florence and Marion 30-40. Sumter County-increased up to 600-800 per night in light traps. Dillon County-eggs increased, 250-300 reported. (Griffith).

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - Counts per 100 cotton terminals by county July 5-11: Ellis and Navarro-infestations up to 32%, damage economic; Collin and Hunt--25-50 fleahoppers in most fields, 66-82 in some, 4-14 in most fields in western Collin County; Rolling Plains area--10-50 in most fields, 51+ in few fields; Fisher, Jones, Haskell, Knox, Kent, and Wichita Counties--square loss heavy; Cottle, Dickens, Fisher, Foard, Jones, Kent, Motley, and Stonewall--20-50; Wichita--5-20 in some fields; Crosby--20-30 in some fields; and Mitchell and Scurry--20% damaged squares in some fields. (Boring et al.). OKLAHOMA - Counts per 100 cotton terminals by county: Blaine--100; Jackson, Harmon, Greer, Tillman, and Kiowa Counties--0-45 (average 12); and Garvin--light to moderate. (Arnold).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - Averages on cotton by county: Sunflower 4% on 2,000 acres, Yalobusha 1% on 5,500, Alcorn--2% on 200, Benton--5% on 3,500, Itawamba--2% on 1,500, Lee-4% on 800, Tallahatchie--12% on 2,000, Tate--2% on 2,050, Tippah--1% on 2,100, Sharkey--5% on 600, Franklin--8% on 200, and Leake--5% on 1,670. (Anderson).

#### TOBACCO

#### INSECTS

A NOCTUID MOTH (Heliothis sp.) - KENTUCKY - Caldwell County-larvae fed on 2-5% of plants in 4 tobacco fields. Larvae nearly full grown and some entered stalks and leaf midribs. (Sloderbeck).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - OHIO - Lawrence County--most injurious tobacco insect present with noticeable feeding damage on most tobacco plants. (Drees).

GREEN PEACH APHID (Myzus persicae) - FLORIDA - Suwannee County-slight increase on untreated tobacco plants at Live Oak, mainly on sucker growth, averaged 204 per plant. (Tappan).

### MISCELLANEOUS FIELD CROPS

# INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - KANSAS - Shawnee, Douglas, and Franklin Counties--larvae infested 5-90% of sunflower heads (70-90% bloom); some treatment. (Hilbert).

PAINTED LADY (Vanessa cardui) - KANSAS - Finney County--serious defoliation of commercial sunflowers. (DePew).

A FLEA BEETLE (Longitarsus waterhousei) - OREGON - Crook County-adults heavy in some peppermint fields at Prineville. Most adults emerged, some pupae and teneral adults in soil. Controls necessary in some fields. (Cacka, Fisher).

# POTATOES, TOMATOES, PEPPERS

#### INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - UTAH - Weber, Box Elder, and Davis Counties--unusuaTly heavy on potatoes, tomatoes, and nightshade weeds week ending July 5. (Duncan, Knowlton). OREGON - Malheur County--very heavy in potato areas. (Burr). OHIO - Jackson County--adults and larvae severely damaged about 350 row ft of potatoes. Only main stem left on some plants. Adults apparently newly emerged, concentrated on several plants, each plant with 20-30 beetles. Heavy damage uneven in planting. (Drees). MAINE - Aroostook County--first generation larval infestation on potatoes in scattered locations at Fort Kent and Presque Isle. (Gall).

VARIEGATED CUTWORM (Peridroma saucia) - MICHIGAN - Cass, Allegan, Montcalm, Tuscola, and Midland Counties and as far north as Emmet County--young larvae (1st to 4th instars) on potatoes week ending July 8. (Hammon et al.).

#### BEANS AND PEAS

#### INSECTS

GREEN CLOVERWORM (<u>Plathypena scabra</u>) - WISCONSIN - St. Croix County--larvae 9 per 25 sweeps of snap beans near harvest, fewer than 1 per linear ft. Central Sands--trace in snap bean field. (Lovett).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - OHIO - Franklin County--heavily infested peas. Foliage very stippled, almost chlorotic, and webbing noticeable. Clusters of mites on undersides of leaves. (Drees).

#### **CUCURBITS**

# DISEASES

CUCUMBER MOSAIC VIRUS - NEW MEXICO - Dona Ana County--moderate numbers of commercial cantaloupe plantings dying. (Iselin).

# INSECTS

SQUASH BUG (Anasa tristis) - OKLAHOMA - Counts on watermelons by county: McIntosh-up to 75 per plant and Garfield-heavy on 10 acres. (Arnold).

#### GENERAL VEGETABLES

## DISEASES

CHRYSANTHEMUM FOLIAR NEMATODE (Aphelenchoides ritzemabosi) - CALIFORNIA - New host record for State. Santa Clara County-larvae and adults recovered from some yellowing leaves of Allium schoenoprasum (chives) at Milpitas. Three acre field in chives for about 5 years. (Werner et al.).

## INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - OHIO - Predicted outbreak begun. Coshocton, Green, and Scioto Counties--garden crops damaged (Miller).

#### CORRECTIONS

CPPR 2(26):472 - BENEFICIAL ORGANISMS AND THEIR ENEMIES - INDIANA - delete "Allen county in Lake Township--May 30 by H. Bollinger, determined by V. Brunjes."

# **DECIDUOUS FRUITS AND NUTS**

## INSECTS

NAVEL ORANGEWORM (<u>Paramyelois</u> transitella) - CALIFORNIA - Fresno County--unusual occurrence of 2nd instar larva in nectarine at Fresno. (Dunnegan).

WESTERN CHERRY FRUIT FLY (Rhagoletis indifferens) - CALIFORNIA - Humboldt County--larvae still found in Royal Ann and Bing cherries at Hoopa. Infested 7 properties. Treatment activities continued. Some trees heavily infested. (Bejarano, Crane).

APPLE MAGGOT (Rhagoletis pomonella) - MINNESOTA - Trap counts by county June 20 to July 6: Hennepin--52, Scott--12, Faribault--1, and Ramsey--53; July 7-13: Faribault--1, Hennepin--38, Scott--8, Ramsey--41, and Washington--5. (Sreenivasam).

EUROPEAN RED MITE (Panonychus ulmi) - OREGON - Washington County--this species and an unidentified eriophyid mite caused various degrees of yellowing and leaf cupping of Parson, Italian, and Milton Early variety prunes in western area. Eriophyid mites from 1-2 to 70-80 per sq inch. Controls underway. (Collins). MISSOURI - Central area--P. ulmi 0-6 (averaged 1.3) per leaf on delicious apple trees. Miticides and heavy rains greatly reduced populations. (Munson). MAINE - Kennebec County--averaged 10 mites and 70 eggs per leaf on non-acaricide treated apple trees at Monmouth July 6. (Gall).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSOURI - Central area--0-6 (averaged 1.3) per leaf on delicious apple trees.
Miticides and heavy rains greatly reduced populations. (Munson).

PECAN NUT CASEBEARER (<u>Acrobasis</u> <u>nuxvorella</u>) - OKLAHOMA - Payne County--adults in 4 light traps in pecan orchard: 99 on July 11, 213 on July 12, 199 on July 13, and 174 on July 14. Egg surveys July 13 showed 4 white eggs on 200 clusters (2%). One half-grown larva each, in Payne and Love Counties. (Arnold).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - Fresno County--first adult of season at Fresno. (Dunnegan).

#### FOREST AND SHADE TREES

## INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) - MICHIGAN - Flight activity began week ending  $\overline{July}$  8. Crawford and Chippewa Counties--adults noted  $\overline{July}$  3. (Kennedy).

SPRUCE SPIDER MITE (Oligonychus ununguis) - OREGON - Benton County--very heavy on Douglas-fir Christmas trees at Monroe, severe needle loss on about 125,000 trees. (Capizzi).

OAK LEAFTIER (<u>Croesia</u> <u>albicomana</u>) - WEST VIRGINIA - Raleigh County--larval damage moderate to heavy in 200 acres of oaks at Daniels; adults in blacklight trap: 3 on June 23, 13 on July 1, 125 on July 7, and 225 on July 8. (Miller).

SOLITARY OAK LEAFMINER (<u>Cameraria hamadryadella</u>) - PENNSYLVANIA - Adams County--larvae and pupae damaged leaves on <u>Quercus alba</u> (white oak) in 10-acre area in Latimore Township. White oaks 10% of stand. (Towers).

HICKORY TUSSOCK MOTH (<u>Halisidota caryae</u>) - OHIO - Lake County--15 mm larvae heavy on chestnut oak trees. Populations increasing and will be heavier in 1977 than during past few years. (Nielsen).

LOCUST LEAFMINER (<u>Odontota</u> <u>dorsalis</u>) - OHIO - Scioto, Jackson, and Ross Counties--severely skeletonized leaves of black locust trees. In several areas many acres damaged and some trees 100% skeletonized. Wayne County--larvae still mining locust leaves, caused blotch mines, no adult feeding present. (Drees). WEST VIRGINIA - Jefferson, Berkeley, and Hampshire Counties--larval damage heavy on black locust trees.(Van Buskirk).

#### MAN AND ANIMALS

# INSECTS

HORN FLY (<u>Haematobia irritans</u>) - TEXAS - Counts on cattle by county July 3-11: South-central area--moderate to heavy; Knox and Archer--heavy; Young--moderate; Coleman, Schleicher, and Sterling--300 per side. (Wilson et al.). OKLAHOMA - Counts per head on calves by county: Noble--500, Nowata and Comanche--moderate to heavy, and Craig and Garvin--moderate. (Arnold). NEBRASKA - Lincoln County--averaged 20 per head on pastured animals July 7. (Campbell, Baxter). MISSOURI - Atchison and Nodaway Counties--light to moderate on 5 herds, ranged 40-500+ (averaged 200) per head. (Munson). FLORIDA - Alachua County--averaged 500 per head in small beef herd at Gainesville. (Weidhaas). Marion County--averaged up to 20 per horse at Ocala. (Simon).

FACE FLY (<u>Musca autumnalis</u>) - NEBRASKA - Lincoln County--light but increased on pastured herds; averaged 6 per head July 7. (Campbell, Boxler). MISSOURI - Atchison and Nodaway Counties--0-16 (averaged 2) per head on 5 herds. (Munson).

MOSQUITOES - MINNESOTA - Metropolitan Mosquito Control District light trap collections July 3-9 in descending rank: Aedes vexans, Culex tarsalis, and Coquillettidia perturbans. Daytime biters in descending rank: A. vexans, A. stimulans, and C. perturbans.

A. vexans predominant in larval collections. (Sreenivasam). NEW HAMPSHIRE - Cool weather continues to assist longevity of some spring mosquito species. Strafford County--Aedes excrucians, A. fitchii, and Coquillettidia perturbans dominant biters at Durham week of June 4. (J.F. Burger).

# BENEFICIAL ORGANISMS & THEIR ENEMIES

# INSECTS

A EULOPHID WASP (<u>Tetrastichus julis</u>) - Recoveries of 20+% parasitism of <u>Oulema melanopus</u> (cereal leaf beetle) larvae in individual oat <u>fields</u> (unless otherwise stated) by State and county. KENTUCKY - Lewis--25% near Tollsboro May 25, 1977. INDIANA - Carroll--54% in Clay Township June 13 and

Noble-Tetrastichus julis parasitism 100% in Orange Township June 15. OHIO - Union-50% in Union Township and 58% in York Township June 9; Paulding-66% in Brown Township June 9; Richland-21% in Weller Township and 23% and 48% (2 fields) in Plymouth Township June 10; Crawford-38% in Whetstone Township and 77% in Liberty Township June 8 and 33% in Lykens Township June 10; Columbiana-46% in Elk Run, 40% in Fairfield, and 88% in Hanover Townships June 13; Knox-72% in Middlebury Township June 9 and 27% in Morris Township June 10; and Washington-65% in Waterford Township June 8. MICHIGAN - Monroe-80% in Milan Township and 33% in Ash Township June 8; Oakland-60% and 77% (2 fields) in Lyon Township June 9; Shiawassee-100% in Perry, 50% in Bennington, and 100% in Antrim Townships June 9; Newaygo-74% in Ensley Township June 15; and Missaukee-30% in Bloomfield Township June 17. VIRGINIA - Pulaski-23% and 83% (2 fields) in Dublin Magisterial District June 7 and 8, and 56% in Pulaski Magisterial District June 8.

PENNSYLVANIA - Franklin--37% in Montgomery Township June 8 and 37% in Quincy Township June 10; Cumberland--27% in Dickinson Township June 10, 82% in Upper Mifflin, and 100% in South Middletown Townships June 14; Mercer--40% in Coolspring Township and 51% in Lake Township June 17; Butler--52% in Brady Township June 16; Lawrence--51% in Wilmington Township June 17; Monroe--50% and 76% (2 fields) in Polk Township June 16, 100% in Hamilton Township June 23; Mifflin--78% in Derry Township June 6; Crawford--78% in North Shenango Township June 14, 50% in Woodcock and Cambridge Townships May 23, and 100% in Venango Township May 31; Indiana--100% in White Township June 20; York--64% in Chaneford and 97% in Fawn Townships June 14; Wyoming--87% in Lemon and 85% in Clinton Townships June 15; Columbia -- 20% in Cleveland and 94% in Bloomsburg Townships June 16; Susquehanna--91% in Lenox Township June 24; Dauphin--40% in Derry Township June 10; Northumberland--51% in Rush Township June 9 and 100% in Delaware Township June 21; Schuylkill--61% in Walker, 89% in Hegins, and 100% in Washington Townships June 17; Snyder--38% in Middle Creek Township June 7 and 89% in Beaver Township June 28; Sullivan--190% in Cherry Township June 23; Juniata--35% in Fermanaugh and 26% in Fayette Townships June 7; Jefferson--100% in Washington Township June 21; Venango--100% in Canal Township June 22; Clarion--100% in Elk Township June 22; Tioga--83% in Chatman and 73% in Deerfield Townships June 24; Northampton-100% in Moore Township June 23; Bradford-100% in Orwell Township June 28; Lebanon-36% in Bethel Township June 15; Westmoreland-64% in Sewickley Township June 15: Montour -- 90% in Anthony Township June 17; Clinton--95% in Beech Creek Township June 23 and 65% in Logan Township June 21; Union--100% in White Deer Township June 24 and Buffalo Township June 27; Potter--75% in Sweden Township June 21; Warren--26% in Farmington Township June 21; McKean--100% in Annin Township June 21; Carbon--83% in East Penn and 88% in Mahoning Townships June 22; Lehigh--100% in Upper Saucon Township June 24; Huntingdon--38% in Penn and 25% in Miller Township June 20; Cambria--84% in Summerhill and 76% in Cambria Townships June 22; York--50% in Paradise Township May 23 and 40% in Dover Township May 31; Lycoming--67% in Washington Township May 24; and Blair--42% in Huston Township May 23.

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NEW YORK - Ontario--Tetrastichus julis parasitism 42% in Richmond Township June 15 and Steuben--100% in Cameron Township June 16. MASSACHUSETTS - Worcester--100% in Spencer Township June 14. New county records for  $\underline{\mathbf{T}}$ .  $\underline{\mathbf{julis}}$  collected from oats (unless otherwise stated) in 1977 follow. (T.L. Burger).

			C	ollect	tion		
County	Area	Co	llector	Date		De	terminer
KENTUCKY							
Mercer	near Burgin	Ε.	Johnson	May 6	3	V.	Montgomery
Lewis	near Tollsboro	C.	Turpen	May :	10	V.	Montgomery
Fleming	near Mt. Carmel	С.	Turpen	May I	17	V.	Montgomery
INDIANA							_
Jay	none given	Н.	Bollinger	May 3			Brunjes
Marion	Lawrence*	R.	Carandang	June	2	٧.	Brunjes
OHIO							
Licking	Washington*	C	Arnold	May 2	2.3	V	Montgomery
HICKING	washing con	· .	minord	may a		٠.	mon egomer y
VIRGINIA							
Wythe	Ft. Chiswell**	C.	Stuart				
		J.	Callahan	June	20	V.	Montgomery
WEST VIRGIN							
Tyler	Meade**	** '	,			**	
(	on orchardgrass)	Hl	leman	May 1	12	V.	Montgomery
DELAWARE							
Kent	near Kentown	R	Dysart				
110110		R.		June	20	R.	Dysart
PENNSYLVAN I	A						
Union	near Foresthill		Bingham	June			J. Dysart
Pickaway	Jackson*	G.	Hamrick	June			J. Dysart
Snyder	Beaver*	J.		June			Montgomery
Juniata	Tuscarora*	J.		June		V .	
Pulaski	Dublin**	W.	Jones	June	7	V.	Montgomery
Northum- berland	Delaware*	т	Stimmel	June	Q	v .	Montgomban
Dauphin	Halifax*	J.		June		v. V.	Montgoméry Montgomery
Fulton	Dublin*		McGinnett	June		v.	Montgomery
Bedford	Juniata*	C.	McGinnett	June		v.	Montgomery
York	Windsor*	R.	Snelboker	June		v.	Montgomery
Lebanon	N. Annville*	J.	Stimmel	June	15	V .	Montgomery
Columbia	Locust*	P.	Krizauskas	June	16	V.	Montgomery
Schuylkill	E. Brunswick*	J.	Stimmel	June	16	V.	Montgomery
	Bridgewater*	P.	Krizauskas	June	17	V.	Montgomery
Sullivan	Forks*						
	oats and barley)	н.	Gates	June		V.	Montgomery
Armstrong	E. Franklin*	J.	Lilley	June		V.	Montgomery
	Hebron*	H.		June June		V.	Montgomery
McKean Tioga	Liberty* Deerfield*	W.	Puchaez Gates	June		V.	Montgomery
Bradford	Troy*	н.	Gates	June		v.	Montgomery
Somerset	Stonycreek*		McGinnett		22	v.	Montgomery
Luzerne	Hollenback*		Krizauskas	June		v.	Montgomery

<sup>\*</sup> Township

<sup>\*\*</sup> Magisterial District

# T. julis continued from previous page.

County	Area	Co	llector	Collec		De	terminer
PENNSYLVANI	A						
Northampton Bucks	Bushkill* Hilltown*	J.	Raub	June	23	V.	Montgomery
	(wheat)	J.	Raub	June	24	V.	Montgomery
Berks	Windsor*	J.	Raub	June	27	V.	Montgomery
Lackawanna	Newton*	J.	Sporer	June	30	V.	Montgomery
NEW YORK							
Herkimer Suffolk	Danube* near Middle	R.	Smullen	June	14	V.	Montgomery
Bullolk	Island	М.	Keller	June	22	R.	Dysart
CONNECTICUT	1						
Litchfield	near Winsted	Μ.	Keller	June	28	R.	Dysart
MASSACHUSET	TS						
Worcester	Dudley*		Laurenza	Tuno	1.4	D	Dowitt
		VV .	Rose	June	14	Р.	DeWitt
VERMONT							
Addison	near Orwell	М.	Keller	June	27	R.	Dysart

AN ICHNEUMONID WASP (<u>Diaparsis</u> sp.) - New county records for this parasite of <u>Oulema melanopus</u> (cereal leaf beetle) larvae on oats (unless otherwise stated) in 1977. (T.L. Burger).

County	Area	Collector	Collection	Determiner
KENTUCKY Mercer (new State)	near Burgin	E. Johnson	May 25	V. Montgomery
OHIO	D	T 117 2 3	T 0	W
Union	Paris*	L. Wilson	June 9	V. Montgomery
MICHIGAN				
Missaukee	Richland*	D. McQuire	June 10	V. Montgomery
VIRGINIA				
Pulaski	Dublin**	W. Jones	May 7	V. Montgomery
Rockbridge	Sweet River**	W.D. Clement	May 23	V. Montgomery
Wythe	Ft. Chiswell**	W. Jones	June 30	V. Montgomery
WEST VIRGINI	ΙA			
	Petersburg**			
	(on barley)	E. Prunty	May 25	V. Montgomery

<sup>\*</sup> Township

<sup>\*\*</sup> Magisterial District

Diaparsis sp. continued from previous page.

County	Area	<u>Collector</u> C	Ollection Date	Determiner
PENNSYLVANI Juniata Blair Wyoming Schuylkill	A Tuscarora* N. Woodbury* Washington* E. Brunswick*	J. Stimmel R. Wareham P. Krizauskas J. Stimmel	June 7 June 8 June 15 June 16	V. Montgomery V. Montgomery V. Montgomery V. Montgomery
Potter	Ulysses*	H. Gates	June 21	V. Montgomery

AN ICHNEUMONID WASP ( $\underline{\text{Lemophagus curtus}}$ ) - New county records for this parasite of  $\underline{\text{Oulema melanopus}}$  (cereal leaf beetle) larvae on oats (unless otherwise stated) in 1977. (T.L. Burger).

County	Area	Co	ollector	Collection Date	D	eterminer
PENNSYLVANIA	A					
Blair	N. Woodbury*	R.	Wareham	May 23	V.	Montgomery
Centre	Ferguson*	Р.	DeWitt	June 8	P.	DeWitt
Lebanon	Millcreek*	J.	Stimmel	June 15	V.	Montgomery
WEST VIRGIN	IA					
Monroe	Sweet Springs**	Ε.	Bostic	June 17	V.	Montgomery

A MYMARID WASP (Anaphes flavipes) - New county records for this parasite of <u>Oulema melanopus</u> (cereal leaf beetle) eggs on oats (unless otherwise stated) in 1977. (T.L. Burger).

		C	collection	
County	_Area_	Collector	Date	Determiner
INDIANA Bartholomew Hendricks Shelby Jay Whitley	none given none given none given Thorncreek*	M. Bratovich E. Huff R. Carandang H. Bollinger	May 30 May 30 May 30 May 30 May 30	V. Brunjes V. Brunjes V. Brunjes V. Brunjes V. Brunjes
Marion	Lawrence*	R. Carandang	June 2	V. Brunjes
OHIO Jefferson	Springfield*	C. Custer	June 10	P. DeWitt
PENNSYLVAN IA Venango	A Canal*	R. Shiner	May 19	P. DeWitt
* Township		** Magis	terial Di	strict

CONVERGENT LADY BEETLE (<u>Hippodamia convergens</u>) - OKLAHOMA - Payne County--ranged 0.8-0.9 per sorghum plant infested with Schizaphis graminum (greenbug). Coleomegilla maculata 0.4-0.5 per plant and lady beetle eggs 5-10 per plant. (Arnold).

#### FEDERAL AND STATE PROGRAMS

# DISEASES

BLACK STEM RUST (Puccinia graminis) aecial collection made June 29 on barberries growing in Dane County, WISCONSIN. (Baumgartner). Stem rust races identified from aecial collections made last week of May by State: VIRGINIA-QSH, QCB, HDM; IOWA-TNM, RTQ, QFB; and MINNESOTA-TNM, RTQ. Aecial collections from Minnesota and Wisconsin generally RYE STEM RUST types and WEST VIRGINIA collections not virulent on wheat, oats, or rye. (Roelfs, Long).

OAT STEM RUST (<u>Puccinia graminis</u> var. <u>avenae</u>) spread from June 29 to July  $\overline{12}$  as far north as central MINNESOTA and southeastern NORTH DAKOTA. Heaviest severity/prevalence in following counties: 10/90 in Johnson, IOWA (Wallerich), and 15/100 in Carver, Minnesota (Goodfellow). Due to early crop maturation little rust loss expected in oat areas. At Rosemount, Minnesota, trace to 5% terminal severities in commercial cultivars. Following races identified from collections received before July 11.

	No. of		Oat S	f Isolat	Races	0.77
Area	Collections	2	31	<u>61</u>	77	87
AL	3		9			
FL	2	2	3			
IA	2		4			
KS	3		9			
LA	4		9	3		
NE	4		8			
OK	2		3	3		
SC	3	7	2			
TX-South	73	4	193	15	2	1
TX-Central	42	9	96	14	1	
TX-North	9	2	24		1	

RYE STEM RUST (<u>Puccinia graminis</u> var. <u>secalis</u>) collections (trace severity) from rye made June 29 to July 12 in southeastern MINNESOTA fields. (Laudon et al.).

WHEAT STEM RUST (Puccinia graminis var. tritici) traces in spring wheat area June 29 to July 12 will cause no losses because of advanced crop growth. Initial collections for 1977 from IOWA (Larson), OHIO (Prentice), and WEST VIRGINIA (Bostic) received past 14 days. Severities trace to 10% throughout eastern COLORADO on commercial winter wheat in late dough stage. (Sexton, Scholten). First rust collection in WYOMING in many years from Laramie County. (Scholten). In nurseries at Rosemount, MINNESOTA, final stem rust severity reading was 80% on McNair (susceptible winter wheat), and reached 20% on Baart (susceptible spring wheat) at soft dough stage. Following races identified on wheat from collections received before July 11.

	No. of Collec-	No.		Iso	lates	of 151	Whea	at St	113	Rust	Race	- Carrier - Carr
Area	tions	TNM	15 TLM	TDM	QCB		QSH	RKQ		RCR	HNL	
AL	1				3							
AR	1						3					
FL	5	8	1		6							
GA	6	11	2		3	2						
IL	1	3										
KS	17	29		2		1	9	1	1			
LA	13				24	2	3			7	3	
MS	1				3							
NE	4	4					7		1			
OK	31	54	1	4		8	14	5	1		4	
SC	1				1							2
TX												
South	12	7			1	2	9	4	1			
Central	7				12	3	3				3	
North	3	2			3		3					
MEXICO	3		2		3			1				

On commercial barley, traces of wheat stem rust common June 29 to July 12 in eastern Colorado. (Scholten). Severities 5% on barley at late milk in Greenbrier County, West Virginia (Bostic), and trace to 1% on susceptible barley cultivars at Rosemount, Minnesota. Races TNM and RTQ identified from collections made May 15 in Brazos County, TEXAS. (Roelfs, Long).

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - New county record. Solano County-found in  $\overline{2}$  diseased trees at Vallejo by H. Reeding and R. Locatelli, July 5, 1977. Confirmed by R. Jones. Sonoma County-detected in 2 new sites at Santa Rosa. (Arciero).

# INSECTS

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - TENNESSEE - New county record. Morgan--eggs and larvae collected from oats at Wartburg by C.E. Turpen, May 6, 1977. Determined by B.J. Stafford. (Gordon, Bruer). NEW HAMPSHIRE - Merrimack County--all 3 larvae collected on oats at Concord and held for rearing, parasitized by a chalcidoid wasp. All larvae died within 10 days of collection and wasp pupae found with remains of dead larvae. Several adult wasps emerged. (T.F. Burger).

GRASSHOPPERS - OREGON - Eastern area--increasing on rangelands. Morrow and Umatilla Counties--nymphs economic on 145,000 acres. No controls planned. (Goeden). WASHINGTON - Asotin, Columbia, Spokane, and Whitman Counties--Melanoplus spp. economic on rangeland. Population, mostly early instars, began to migrate. (Jackson). IDAHO - Ada County--adults and nymphs 10-15 per sq yd in alfalfa hay field, 25% damage to 20 acres near Boise. (Saunders).

OKLAHOMA - Grasshopper counts by county: Cimarron--light to moderate in home gardens; Harper--heavy in alfalfa and gardens and damaging fruit and leaves of fruit trees; Hughes--moderate in sudangrass pastures; McIntosh--heavy in gardens; Wagoner-heavy in alfalfa in 2 fields, Bryan-heavy in gardens and pastures; Choctaw--heavy in pastures, some fields of soybeans, and on leaves of pecan trees in 1 grove; southwestern counties -damaged margins in cotton fields. (Arnold). ARKANSAS - Johnson County--50+ per sq yd in orchardgrass and fescue pastures. (Mayse). MISSOURI - Northwestern area--Melanoplus differentialis 0-40 per sq yd in marginal rows of corn, damaged 8-20 marginal rows. Melanoplus spp. counts per sq yd of pasture by county: Lafayette--2-36 on 3 fescue and orchard pastures; Atchison and Nodaway Counties--2-18 in pasture and 6-55 in margins of brome and fescue pastures. Counts per sq yd of alfalfa by county: Lafayette-mainly M. differentialis 3-26, one field 30% defoliated; Buchanan, Atchison, and Nodaway--3-46, one field in Buchanan County 85% defoliated. (Munson).

NORTH DAKOTA - Grasshopper counts (and averages) per sq yd by county: Grant-0-44 (3) in field area and 0-10 (2) on margins; Sheridan-0-4 (1.5) in field areas and 0-4 (2) on margins.  $\underline{\underline{M}}$ .  $\underline{\underline{femurrubrum}}$  mostly 3rd and 4th instars;  $\underline{\underline{M}}$ .  $\underline{\underline{bivittatus}}$  and  $\underline{\underline{M}}$ .  $\underline{\underline{sanguinipes}}$  5th instar to adults. Grant County--light damage in marginal area of 1 oat field, up to 57 (averaged 44) per sq yd in 1 alfalfa field. (Scholl). MINNESOTA - Counts per sq yd by county week ending July 8: Southeastern Becker and southwestern Hubbard Counties--heavy in some areas, averaged 30-50 in alfalfa field margins and roadsides and 20 in some fields, most  $\underline{M}$ . femurrubrum and M. bivittatus 3rd instars to adults; northwest, south-central, and southeast districts--trace to less than 1. Current counts per sq'yd of alfalfa by county: Swift, Chippewa, Clay, and Wilkin--still 5-8 within fields and 10-12 in margins of some fields; McLeod--12 in 1 field. By district: Northwestern--4, west-central--5-8, central--4-5, east-central--3-5, southwest 4-6, south-central and southeast--1-2. Fourth instars to adults of Melanoplus femurrubrum, M. bivittatus, and M. differentialis common. Second cutting of alfalfa almost completed. Some grain fields underseeded with alfalfa had to be treated in Rock County after small grains harvested. (Sreenivasam). MICHIGAN - Otsego, Cheboygan, Gogebic, and Delta Counties -- heavy on roadside grasses week ending July 8. Northern area--heavy. (Ruppel).

GYPSY MOTH (Lymantria dispar) - NEW HAMPSHIRE - Merrimack County-first serious defoliation since 1971 in State. Reported from Canterbury in late June. Infested about 100 acres adjacent to National Interstate 93 north of Concord. Deciduous trees averaged 90-100% defoliation on June 28 and all understory vegetation, principally blueberry shrubs, completely stripped of leaves. Pupation began last week of June; adults still continue to emerge. Mated pairs and egg laying females at infested site on July 5. Old egg masses up to 8 per tree trunk indicated area at least moderately infested in 1976 but probably not severely enough to be detected from road. About 20% of larvae and pupae examined, diseased and not viable. Parasite activity noticeable throughout infested area. A large tachinid fly (possibly Blepharipa pratensis) and an ichneumonid wasp noted investigating masses of gypsy moth pupae; the ichneumonid wasp laid eggs in 4 pupae.

One specimen of Brachymeria (a chalcid wasp) investigated mass of gypsy moth pupae. To date, adults of Compsilura concinnata (a tachinid fly) and an ichneumonid parasite reared from gypsy moth pupae. No other unusual gypsy moth activity in other areas of State. (J.F. Burger et al.).

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - New county record. Champaign County--collected from roses at home in Champaign, by W. Bever, July 6, 1977. Determined by J. Bouseman. (Black). MARYLAND - Eastern Shore counties--spotty feeding on corn silks throughout area, 500 acres field corn sprayed; 5 adults per silk in 30 acres of field corn in postpollination silk in Dorchester County. Soybean defoliation 2-20% in infested fields in Kent, Queen Annes, Caroline, Dorchester, and Wicomico Counties. (Hellman, Pinto).

RANGE CATERPILLAR (<u>Hemileuca</u> <u>oliviae</u>) - NEW MEXICO - Union County--spraying nearly completed, about 115,000 acres treated. Colfax, Harding, and Mora Counties--larval development continuing with light grass damage. Harding County--controls underway by July 15. (Lucht).

SCREWWORM (<u>Cochliomyia hominivorax</u>) - Three cases reported from continental United States June 26 to July 2 as follows: Arizona 3. (Meadows). Total of 123 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 620 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 122,115,600 as follows: Texas 90,588,600, New Mexico 5,697,000, Arizona 24,930,000, California 900,000. Total of 158,994,000 sterile flies released within Barrier of Mexico. (Williams, Smith).

WHITEFRINGED BEETLES (<u>Graphognathus</u> spp.) - ALABAMA - Monroe County--all stages infested young sycamore plants in research test plot at Excel. Larvae 12 or more at base of some plants with 5% loss of plants and additional 5% loss expected. Escambia County--damaged 150 acres of potatoes at Atmore, prevented potatoes from holding grade. (Lemons).

# HAWAII PEST REPORT

New Western Hemisphere Record - Adults of a NOCTUID MOTH (Pandesma anysa Guende) collected from light traps by J.W.

Beardsley. First adult at Hickam Air Force Base, Oahu, on November 20, 1975; another 2 on January 23, 1976. Two more at Barbers Point Naval Air Station on July 27, 1976. Determined by E.L. Todd. A few dozen adults trapped at these 2 areas since then. Larvae recovered from under bark and base of Pithecellobium dulce (huamuchil) trees at Barbers Point Naval Station, February 25, 1977; reared adults determined by J.W. Beardsley. Several pupae encased in frass and earthen cells. No extensive foliar damage on infested trees. Adults of Eucelatoria sp. probably armigera (a tachinid fly) reared from several of the noctuid Tarvae. This noctuid moth has been recorded on Acacia and Prosopis spp. from India, Africa, Spain, Palestine, and Sri Lanka. (Beardsley et al.).

New State Records - An ERIOPHYID MITE (Eriophyes granati) heavy on large pomegranate tree at Palolo Valley, Oahu. Observed by L. Nakahara, June 21, 1977. Determined by F.H. Haramoto. (L. Nakahara).

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) heavily mined 25-90% of leaves on tomato (1 acre), yardlong beans (0.5 acre), and hyotan squash (0.25 acre) at Waianae, Oahu. Heavily infested yard plantings of tomato and snap beans at Lahaina, Maui. (Miyahira, L. Nakahara). DIAMONDBACK MOTH (Plutella xylostella) counts and damage heavy on 0.25 acre of head cabbage at Omaopio, Maui. (Miyahira). GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) heavy on yard plantings of tomato and snap beans at Lahaina, and on taro and eggplant at Pearl City, Oahu. (Miyahira, L. Nakahara).

Turf and Pasture - GRASS WEBWORM (Herpetogramma licarsisalis) - moderate to heavy (8-25 larvae and 1 pupa per sq ft) in 3 acres of kikuyugrass pasture at Kainaliu and in 30 acres of pangolagrass pasture at Hilo, Hawaii Island. Moderate in larger pastures at central Kona, Hawaii Island. Two webworm parasites, Eucelatoria sp. (a tachinid fly) and Casinaria infesta (an ichneumonid wasp), in all 3 locations. (Matayoshi et al.).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

# INSECTS

A NOCTUID MOTH (<u>Pandesma</u> <u>anysa</u> Guenée) - HAWAII - Oahu Island. (p. 548).

NEW STATE RECORDS

# DISEASES

ALFALFA CROWN WART (Physoderma alfalfae) - PENNSYLVANIA - Washington County. (p. 531).

## INSECTS

AN ERIOPHYID MITE (<u>Eriophyes</u> <u>granati</u>) - HAWAII - Oahu Island. (p. 548).

AN ICHNEUMONID WASP (Diaparsis sp.) - KENTUCKY - See p. 542.

A RHIZOPHAGID BEETLE (<u>Pycnotomina cavicolle</u>) - MARYLAND - Independent City of Baltimore--collected in pine lure trap by J.F. Cavey June 7, 1976. Determined by E.J. Ford.

A SCARAB (Anomala umbra) - MARYLAND - Worcester County--collected in blacklight trap at Snow Hill by R.L. Davis June 29, 1976. Determined by R.D. Gordon.

NEW COUNTY AND INDEPENDENT CITY RECORDS

# DISEASES

DUTCH ELM DISEASE (<u>Ceratocystis ulmi</u>) - CALIFORNIA - Solano. (p. 545).

#### INSECTS

A CARABID BEETLE (Panagaeus cruciger) - MARYLAND - Worcester County--collected in blacklight trap at Snow Hill by R.L. Davis August 6, 1976. Determined by E.J. Ford.

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - TENNESSEE - Morgan. (p. 545).

A EULOPHID WASP (Tetrastichus julis) - See p. 541-542.

ICHNEUMONID WASPS ( $\underline{\text{Diaparsis}}$  sp. and  $\underline{\text{Lemophagus}}$   $\underline{\text{curtus}}$ ) - See p. 542-543.

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - See p. 547.

A MYMARID WASP (Anaphes flavipes) - See p. 543.

A WEEVIL (Cryptorhynchus fuscatus) - MARYLAND - Independent City of Baltimore--collected on dead Fagus grandifolia (beech tree) by J.F. Cavey June 22, 1976. Determined by D.R. Whitehead.

WESTERN CORN ROOTWORM (Diabrotica virgifera) - ILLINOIS - Monroe and Cumberland. (p. 529).

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LIGHT TRAP COLLECTIONS	NEW JERSEY New Egyp	OHIO (County) Wayne 7/9-1	OREGON Dever-Coi St. Paul	TEXAS Coll	WEST VIRGINIA (Counties) Monroe 7/11 Randolph 7/12	W ISCONSIN Hancock Mazomani	
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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable	Port of Entry	Desti- nation
Caliciopsis maxima (Burk. & Curt.) a fungus Det. F.G. Pollack	perfect	on leaves of fern plants	Malaysia	Miami	I <sub>H</sub>
Dyscinetus sp. a scarab Det. R.D. Gordon	adult	in hold of ship	Colombia	Miami	USA
Leucinodes orbonalis Guenee a pyralid moth Det. J. Dooley	larval	in eggplant from baggage	Ghana	Los Angeles	CA
Maladera sp. a scarab Det. D.M. Pike	adult	in aircraft holds	Asia	Seattle	USA
Melalgus sp. a bostnichid beetle Det. D.M. Anderson	larval	in lumber	Costa Rica	New Orleans	Li Li
Parlatonia blanchandii (Targ. 8 parlatoria date scale Tozz.) Det. J. Dooley	adult	on date fronds from baggage	Israel	Los Angeles	CA
Trogoderma granarium Everts  Khapra beetle Det. F. Krim	all	in all holds of a ship	Sudan	New York	USA
Monacha carthusiana (Müller)  a helicid snail Det. R. Munkittrick	juvenile	on container vans of cargo	Italy	Houston	TX





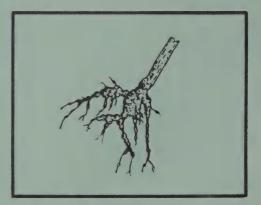


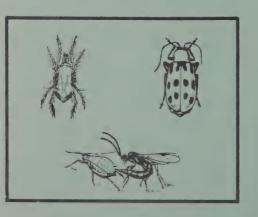
UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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a SB823 . US3 1 VOL. 2 NO. 30

# Cooperative PLANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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# **COOPERATIVE PLANT PEST REPORT**

### HIGHLIGHTS

# Current Conditions

CORN EARWORM flights and egg laying on soybeans very heavy in central and southern Alabama. Potentially severe on soybeans in Piedmont and Coastal Plain of North Carolina. (p. 555).

GREENBUG economic on sorghum in parts of Texas and Kansas. (p. 556).

COMMON MAIZE RUST prevalence on corn plants 70-100% in parts of Kansas, Iowa, and Minnesota. (p. 557).

FALL ARMYWORM larvae 1-6 per cornstalk in southern and central Alabama. Controls on corn difficult in drought-stressed parts of North Carolina. Scattered severe damage to late-planted corn in Virginia and Delaware. (p. 558-559).

Scattered problems with NOCTUID larvae on soybeans in Florida and South Carolina (p. 563) and on peanuts in southeastern Alabama (p. 564).

VARIEGATED CUTWORM damaged tobacco in many parts of Tennessee and Kentucky. (p. 567).

# Detection

For new county records see page 574.

New host records for 2 ARMORED SCALES (p. 569) and GREENHOUSE WHITEFLY (p. 570) in Florida, and a MEALYBUG (p. 573) in Hawaii.

Reports in this issue are for the week ending July 22 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

# DISEASES

MAIZE DWARF MOSAIC VIRUS - KANSAS - Lyon County--trace in 1 corn field. Statewide--most obvious sorghum disease but scattered and variable; Wabaunsee and Douglas Counties--infections 5-100% in fields surveyed. Red leaf stage obvious in more heavily infected fields. (Sim).

# INSECTS

ARMYWORM (Pseudaletia unipuncta) - NORTH CAROLINA - Southern and central Coastal Plain counties—damage to all corn stages continued week ending July 15. Columbus and Robeson Counties to Washington County—damaged 3,000+ acres July 11-15. (Williford et al.). Robeson, Sampson, and Richmond Counties—damage continued to pastures and hay fields (primarily Coastal bermudagrass) week ending July 15. Treated about 2,000 acres of pastures in State to date. Apparently subsiding in most areas. (Flynt, Hunt). Piedmont and mountains—currently, damage continued on corn; controls had been applied to about 50 acres in Anson and Stanly Counties and small Macon County field (15 acres or less). Coastal Plain—problem appears to have subsided. (Rollins, Fedoronko). WEST VIRGINIA - Summers County—heavy damage to 5 acres of corn. (Baniecki).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Box Elder County-adults 1-2 per sweep on Atriplex, Russian thistle, and halogeton short growth in dry area at Kelton. (Knowlton).

CORN EARWORM (Heliothis zea) - ALABAMA - Southern and central areas--adult flights and egg laying very heavy with 1-25 eggs per 5,000 sq ft of soybeans in many fields. Leaf and pod feeding should begin. (Henderson et al.). Houston County--larvae heavy and widespread as foliar feeders in almost all peanut fields. (Roney). TENNESSEE - Western area--continued heavy in all corn fields week ending July 15. (Locke).

NORTH CAROLINA - Coastal Plain counties—corn earworm surveys in 23 corn fields from Robeson County to Halifax County week ending July 15. Infested 65% of 600 ears. Infested 2-96% of ears per field, averaged 17-85% depending upon silking date. (Hunt). Currently pupated at rapid rate in corn. Counts in 15 southern Piedmont fields and 4 southern Coastal Plain fields—larvae in 40-50% of ears July 18-21, compared with 65% July 11-15. (Wells, Buchanan). Piedmont and Coastal Plain—adults in 20 soybean fields heavy about 7 days earlier than in past 8 years. Eggs laid on early blooming varieties (Essex, Forrest, York, Dare, Group V), these varieties usually escape threshold level populations. Potential for severe attack in many soybean fields because drought stress left many open canopy fields. Eggs will be laid over longer period of time than usual. (Hunt).

WEST VIRGINIA - Kanawha and Summers Counties--corn earworm damaged 35% of tomato fruit in several gardens. (Hacker). MARYLAND - State-wide--remained unusually light; blacklight trap catches averaged less than 1 per night. (Hellman, Pinto).

CORN LEAF APHID (Rhopalosiphum maidis) - KANSAS - Counts in sorghum whorls by county: Morton, Stanton, Grant, Kearny, Hamilton, Finney, Gray, Greeley, and Wichita--increased and often heavy on 12-inch to bloom sorghum, reddened terminal leaves in some fields, some treated (Shuman); Sherman--often heavy (Rheinhardt); Brown, Atchison, Jefferson, Riley, Anderson, Coffey, Douglas, and Osage--light to moderate on 2 to 22-inch sorghum (Hilbert). OHIO - Fulton, Paulding, and Wood Counties--colonies in 50+% of surveyed corn plants with whorls surrounding newly formed tassels. (Drees).

GREENBUG (Schizaphis graminum) - TEXAS - Status on sorghum July 10-19 by county: Tom Green and Runnels--0-4 dead leaves; Castro and Lamb--first mummies July 10, greenbug economic and increased in many fields; Deaf Smith and Randall--damaged preboot. (Bohmfalk). KANSAS - Cowley and Leavenworth Counties--economic in some sorghum fields. Anderson, Coffey, Douglas, Osage, Atchison, and Jefferson Counties--commonly threatening to economic and increasing on 2-inch to bloom sorghum; much flight activity in Riley and these counties. (Hilbert et al.). Coffey and Atchison Counties--very heavy, seedling sorghum planted after wheat dying; some treating (Hilbert, Bell). Brown County--decreased rapidly in some boot to bloom sorghum fields due to heavy parasitism. (Bell). Morton, Stanton, Grant, Kearny, Hamilton, Finney, Gray, Greeley, and Wichita Counties--generally none to light on sorghum; none on late sorghum. (Shuman).

POTATO LEAFHOPPER (Empoasca fabae) - OHIO - Increased on soybeans, counts per sweep of 20 to 36-inch soybeans by county: Williams--0.81, Fulton--0.48, Defiance--0.38, and Paulding--0.21. Heavy numbers and very hot weather severely affected many potato plantings. Henry County--many plants already dead, remainder with characteristic "hopperburn" damage. (Drees). WISCONSIN - Potato leafhopper counts by area: West-central and southwestern counties--0-12 per sweep of alfalfa, recent rains will allow alfalfa to stay ahead of populations in most cases; Spring Green area--nymphs and adults 0-10 per 10 sweeps of potatoes; Central Sands area-4 per sweep in potato field, "hopperburn" apparent and 1 per 25 sweeps of snap beans; Rock County--moderate in beets. (Lovett).

TOBACCO BUDWORM (Heliothis virescens) - MARYLAND - All tobacco counties--infested average of 1% of plants, light. (Hellman, Pinto).

TOBACCO HORNWORM (Manduca sexta) - NORTH CAROLINA - Lenoir County-threshold level (10%) in 6 of 109 tobacco fields. Infestation heaviest at 33% with average for all fields sampled at 2.5%. Granville County-egg counts indicate potential problem in 5 of 36 fields, up to 1.8 eggs per plant in 1 field. (Harper, Baumhover). MARYLAND - Prince Georges County--late instars of this species and TOMATO HORNWORM (M. quinquemaculata) infested 5% of tobacco plants. (Hellman, Pinto).

# CORN, SORGHUM, SUGARCANE

# DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Eastern area-most widespread disease on corn. Plants infected by county: Geary, Chase, and Lyon--20-50%; Jefferson--100% in popcorn field. (Sim). MISSOURI - Warren, St. Charles, and Bollinger Counties--infected 2-5% of corn plants, a few pustules per plant. (Foudin). IOWA - Field corn plants infected (and severity) by county week ending July 15: Carroll--60-70% (trace to 1%), Crawford 70% (trace to 2%), Monona 70% (trace to 2%), Montgomery 70% (trace), Pottawattamie 80% (trace to 1%), Adams 20% (trace), Clarke 80% (trace to 1%). Current counts: Tama--80% (trace to 5%); Benton--80% (trace), Jones--10% (trace), Clinton--50% (trace), Muscatine--40% (trace), Dubuque--10% (trace), Des Moines--10% (trace), Jefferson--30% (trace), Wapello--90% (trace to 2%), Lucas--90% (2-5%), Jasper--5% (trace). (Williams).

MINNESOTA - Southern and central areas--common maize rust in all corn fields surveyed week ending July 15, almost 100% of plants affected, severity trace to 5%. (Stromberg). MICHIGAN - St. Joseph County--traces on commercial corn. (Singh).

COMMON SMUT (<u>Ustilago maydis</u>) - MISSOURI - Warren, Perry, Bollinger, and Stoddard <u>Counties</u>—trace levels, less than 0.5% of corn; Jefferson County—2-5%. (Foudin). IOWA - Corn plants infected (and severity) by county: Tama—1% (trace to 50%); Benton—5% (trace); Clinton and Wapello—1% (trace). (Williams). MINNESOTA - Southern and central areas—on corn in 4 of 21 sites week ending July 15. Severity by county: Swift, Chippewa, and Yellow Medicine—trace; Lac qui Parle—5-10% infection. Current severity in Blue Earth County—almost 20% in 1 field south of Mankato, affected cobs, tassels, stalks, and leaves, no evidence of hail damage. Sibley—trace in 1 field. (Stromberg).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - MINNESOTA - Southern and central areas--in 10 of 21 corn sites week ending July 15. Plants infected (and severity): 20% to almost 100% (trace to 5% of leaf surface) at 9 sites; 80% (almost 50-75%) in 1 field at Kandiyohi and Meeker County line. Infected area in this field associated with irrigation pattern of sprinkler system. (Stromberg).

CORN BROWN SPOT (Physoderma maydis) - KANSAS - Jefferson County-affected 10% of plants in popcorn field. (Sim).

STEWART'S WILT (Erwinia stewartii) - MISSOURI - Corn plants infected (and severity) by county: Callaway, Warren, Bollinger, and Stoddard 20-30% (single spots to 5% of leaf area), Jefferson 40% (10-15% of leaf area). Corn in dough stage. Weather warmer than normal with below average to average rainfall. (Foudin).

HOLCUS SPOT (Pseudomonas syringae) - MINNESOTA - Southern and central areas--in all corn fields surveyed week ending July 15, almost all plants exhibited 5-10% severity on leaves, especially on lower half of stalk. One field in Renville County approached 20% severity on all leaves of affected plants. Currently affected almost 100% of plants surveyed with trace to 5% severity. (Stromberg).

MOSAIC DWARF AGENT - MINNESOTA - Southwestern area--in 5 fields of field corn week ending July 15 in Rock, Lincoln, Yellow Medicine, Renville, and Swift to Chippewa Counties. One field in Rock County showed almost 30% incidence with high aphid population. Plants affected show mosaic and mottling pattern and are severely stunted. Cob initiation within staminate flower. Preliminary electron microscopy examination did not reveal rod-shaped virus particles. Rock, Lyon, and Brown Counties--currently trace to 5% incidence. Sibley, Blue Earth, and Steele Counties farther east--no symptoms. Additional leaf dip electron microscopic examination did not reveal any virus particles. (Stromberg).

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - MONTANA - Yellowstone County--eggs hatched on corn. (Jensen). MINNESOTA - Light trap counts increased significantly. Average infested plants (and larvae) per 100 corn plants in 11 fields by district: North-western--1 (2), west-central--5 (10), central--5 (11), south-western--6 (6), south-central--6 (1), southeastern--9 (6). (Sreenivasam). WISCONSIN - Adults increased in blacklight traps. Southern counties--egg laying underway on corn. Oconto and Shawano Counties--17% and 66% of larvae in 5th instar. (Lovett).

IOWA - Statewide--second generation European corn borer adult flight peaked July 14-17. Harrison County--lst instar larvae in field corn. (J.R. DeWitt). ILLINOIS - Northern third of State-about 50% pupated. (Paullus). KENTUCKY - Madison County--almost all larvae pupated and adults emerged from 90% of pupae in 1 corn field by July 19. Daviess County--several late instar larvae, 1 pupa, and some empty pupal cases in corn field July 20. (Sloderbeck).

MICHIGAN - Berrien County--second generation European corn borer larvae on sweet corn week ending July 15, about 7-10 days earlier than in most years. Berrien and Lenawee Counties--first generation adults in full flight in southern counties and beginning in central counties. (Wells). MARYLAND - Eastern Shore counties--egg laying increased on corn. Statewide--blacklight trap catches ranged 7-36 per night, averaged 35 per night in Somerset County. (Hellman, Pinto).

SOUTHWESTERN CORN BORER (<u>Diatraea grandiosella</u>) - KANSAS - Stafford County--egg laying decreased at St. John area, had peaked about July 16. (Poston). KENTUCKY - Graves County--first egg mass of season on corn July 18. (Raney).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Oktibbeha and Neshoba Counties--heavy on corn. (Anderson). ALABAMA - Southern and central areas--larvae 1-6 per stalk in tassels, whorls, and ears in almost all corn fields. Bullock, Russell, Lee, Autauga, and Marengo Counties--adults 1-25 per 5,000 sq ft. (Walker et al.). Marengo County--lst to 3rd instar larvae 1-2 in 50% of whorls on 6 to 8-inch grain sorghum in 200 acres; controls applied. (Yates).

NORTH CAROLINA - Bladen (3 fields) and Columbus (2 fields) Counties--active in pretassel corn. Twisted leaf blades, due to drought, protecting larvae in whorls. Infested about 600 acres up to July 15. (Hunt). Granville, Anson, Moore, and Washington Counties--currently infested up to 80% of plants, severely damaged

scattered late-maturing corn and sorghum. Fall armyworm damage was heavy in a 40+ acre field each in Granville and Washington Counties; other infestations averaged 1-10 acres. Controls very difficult in drought-stressed fields. (Murfree et al.). KENTUCKY - Rowan County--late instar larvae infested 30-40% of knee-high corn in 1 field. (Christensen). INDIANA - Southwest district--almost full-grown larvae trace in whorls of corn in 2 counties. (Gibson et al.).

VIRGINIA - Charlotte County--fall armyworm and some ARMYWORM (Pseudaletia unipuncta) seriously damaged late-planted corn. Corn, shorter than knee-high, severely damaged and required immediate control. Stafford, Rockbridge, Caroline, Pittsylvania, and Scott Counties--spotty but severe fall armyworm damage. (Allen). DELAWARE - Sussex and Kent Counties--severe on late-planted sweet corn. (Burbutis, Kelsey).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - TEXAS - Dallam County--1st instars on corn tassels July 18, eggs on less than 10% of stalks in most fields in northwest area. (Patrick). KANSAS - Percent corn plants infested by county: Stanton 0-50, Finney 10-30, Morton 0-20, Hamilton 0-20, Grant 0-10, Kearny 0-10, Gray 0-10, Greeley trace, and Wichita trace. Eggs to 0.5-inch larvae on corn 3 inches to milk stage. Larvae fed on tassels, ears, and sterile ears. (Shuman). COLORADO - Yuma County--averaged 1 egg mass per 5 plants in corn fields. Some eggs beginning to hatch. (Hantsbarger).

BLACK CUTWORM (Agrotis ipsilon) - KANSAS - Anderson County-damaged 5 acres of 8-inch sorghum. (Hilbert).

VARIEGATED CUTWORM (Peridroma saucia) - OHIO - Wayne County-uncharacteristic feeding at midday in corn whorls. (Szatmari-Goodman).

CORN ROOTWORMS (Diabrotica spp.) - COLORADO - Larimer County-First WESTERN CORN ROOTWORM (D. virgifera) adult July 7. (Capinera). NEW MEXICO - New D. virgifera county record: Union--adults averaged 5-15 per cornstalk on seed corn east of Clayton. Collected and determined by W. Iselin, July 14, 1977. (Iselin). TEXAS - New D. virgifera county record: Hale--adults common in corn and cutting silk, city not available. Collected by E.E. Latham and G.B. Cronholm, July 5, 1977. Determined by J.A. Jackman. (Jackman). KANSAS - Sheridan County--some serious D. virgifera root damage and lodging in several furrow-irrigated corn fields. (Rheinhardt).

IOWA - Statewide--D. virgifera up to 30 per corn plant week ending July 15. Central area--numbers heaviest in drought-stricken areas. Linn County--severe "goosenecking" and lodging of sweet corn in commercial patch July 13. D. virgifera and NORTHERN CORN ROOTWORM (D. longicornis) averaged 4 per plant. Benton County--D. virgifera currently 25-35 per plant on field corn, cut silks in late-season corn. (J.R. DeWitt). ILLINOIS - New D. virgifera county records from corn: Wayne--near Cisne by K. Black, July 11, 1977; Fayette--southwest of Vandalia by J. Fagetti, July 14; Madison--northeast of Alton by R. Cornwell, July 14. All

determined by J. Bouseman. (Black). INDIANA - New Diabrotica virgifera county records from grain corn in 1977. All determined by the collector and confirmed by G. VanWoerkam.

County	Nearest 	Collector	Collection Date
Monroe	Stineville	R. Meyer R. Meyer R. Meyer R. Meyer J. Dill	July 17
Lawrence	Avoca		July 18
Martin	Bramble		July 18
Daviess	Odon		July 18
Scott	Austin		July 19

Catch of males to females—D. virgifera 133:9 and D. longicornis 206:9 in 10 sticky traps in Tippecanoe County. (Meyer).

KENTUCKY - D. longicornis near economic levels in some fields. Graves County--adults about 8 per plant in 1 corn field. (Raney). Madison County--adults trace to 3 per plant in 10 fields. (Sloderbeck). OHIO - Defiance, Fulton, Henry, Paulding, Williams, and Wood Counties--D. virgifera adults present on corn but heaviest in Defiance and Paulding Counties, closely agreeing with population densities of 1976. Adults resting and feeding in whorls on 3-ft corn; actively feeding on silk, tassels, and pollen on taller corn. Mating observed. D. longicornis heavier on silk in Henry and Wood Counties but very few in Paulding or Williams Counties. (Drees).

DESERT CORN FLEA BEETLE (Chaetocnema ectypa) - NEVADA - Clark County--adults 4-29 (averaged 10) per 12 to 18-inch sorghum plant at Virgin Valley week ending July 15. Leaf damage moderate to heavy. (Bechtel et al.).

CHINCH BUG (Blissus leucopterus leucopterus) - MISSISSIPPI - Wilkinson County--heavy damage on preboot grain sorghum. Controls effective. (Jarratt). KANSAS - Riley, Reno, Harvey, Dickinson, Douglas, and Osage Counties--second generation nymphs increased on sorghum. (Wilde et al.).

SOUTHERN CHINCH BUG (Blissus insularis) - ALABAMA - Marengo County--all stages damaged 25-35% of 80-acre field of mixed Johnsongrass and grain sorghum; controls applied. (Yates).

GRASSHOPPERS (Melanoplus spp.) - IOWA - Ringgold and Cerro Gordo Counties--late instar nymphs damaged field corn. Border rows destroyed. Damage expected to increase statewide. (J.R. DeWitt).

#### SMALL GRAINS

#### DISEASES

EYESPOT (Pyrenophora trichostoma) - NORTH DAKOTA - Cass, Richland, Ransom, Sargent, Dickey, La Moure, Logan, McIntosh, Emmons, Burleigh, Kidder, Stutsman, Foster, Wells, McLean, Sheridan, and Eddy Counties--infected 100% of hard red wheat and durum wheat plants. Severities 5-10% (moderate) on flag leaves and 50% or more (heavy) on lower leaves. (Jons).

WHEAT LEAF RUST (Puccinia recondita) - NORTH DAKOTA - Percent of severity/prevalence on wheat plants by county: Dickey--2/50, McLean--2/50, Wells--5/100, Stutsman--5/100. (Jons).

OAT CROWN RUST (<u>Puccinia</u> <u>coronata</u>) - NORTH DAKOTA - Cass, Richland, Ransom, Sargent, <u>Dickey</u>, <u>La Moure</u>, and Stutsman Counties--trace in oat fields surveyed. (Jons).

LOOSE SMUT (Ustilago nuda) - NORTH DAKOTA - Hard red spring wheat plants infected by county: Cass--2%, Richland--1-5%, Sargent--1-3%, Dickey--2%, and Stutsman--1%. Durum wheat plants infected by county: McLean--2% and Sheridan--2%. (Jons).

CORONAFACIENS HALO BLIGHT (Pseudomonas coronafaciens) - WISCONSIN - Bayfield County--infection light to moderate on scattered plants throughout oat fields. (Lovett).

# INSECTS

FALSE CHINCH BUG (Nysius ericae) - TEXAS - Dimmit County July 12-very heavy on wheat, 30-40% stand loss. (Moore).

# TURF, PASTURES, RANGELAND

# INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Southwestern area--fed on green pastures and meadows. (Wall). MISSISSIPPI - Wilkinson County--heavy on Alicia bermudagrass pasture. Controls effective. Carroll County--light to moderate on Coastal bermudagrass. (Jarratt). ALABAMA - St. Clair County--larvae at and above economic levels in 800-acre commercial grass nursery; controls applied. (Pair).

WESTERN TUSSOCK MOTH (Orgyia vetusta) - NEVADA - Near Carson City and in Carson Valley, Douglas County, and at Galena Creek, Washoe County--larvae heavily infested primarily Purshia tridentata (Antelope bush) week ending July 15. Many plants almost completely defoliated. (Horton, Van Ness).

A SCARAB (Ataenius spretulus) - OHIO - Clermont and Hamilton Counties--first egg clusters of second generation July 7. (Wegner). WEST VIRGINIA - Kanawha County--75-80% larval damage to fairway turf on golf course, 38 larvae and 5 adults per sq ft. (Hacker).

CHINCH BUG (<u>Blissus leucopterus</u> <u>leucopterus</u>) - OHIO - Northern area--averaged 250 or more per sq ft of untreated lawns in Wayne County. Franklin County--damage becoming noticeable. (Niemczyk).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - Fresno County--adults and nymphs 20-30 per sq ft on St. Augustinegrass at Fresno and Coalinga. (Dunnegan).

# FORAGE LEGUMES

# DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Chase County-infected 100% of alfalfa plants in 1 field, some defoliation. (Sim).

# INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - IOWA - Plymouth, Winnebago, Crawford, and Woodbury Counties--larvae damaged stubble of third cutting alfalfa; larvae 0.5-l inch long on 10% of stems in 5 to 6-inch stubble in Crawford County. (J.R. DeWitt).

GARDEN WEBWORM (Loxostege rantalis) - KANSAS - Douglas, Osage, and Coffey Counties--infested trace to 7% of terminals in 3 alfalfa fields. Heavy infestation in Douglas County treated; larvae newly hatched to 0.5 inch. (Hilbert).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Pershing County-averaged 200+ per sweep in 1 seed alfalfa field at Lovelock, July 8, and 40 per sweep this period. (Wilcox). UTAH - Box Elder County-8-30 per sweep on irrigated alfalfa at Kelton. (Davis, Knowlton). Millard County-50-100 per sweep in some fields at Delta. Many fields aerially sprayed. (Karren). COLORADO - Mesa County-up to 200 per sweep retarded second growth alfalfa; 0-3,000 per 100 sweeps in Arkansas Valley area. No damage. (Bulla, Schweissing).

LYGUS BUGS (Lygus spp.) - TEXAS - Pecos and Reeves Counties--up to  $108~{\rm per}~50~{\rm sweeps}$  of alfalfa July 14. (Foster).

# SOYBEANS

# DISEASES

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS - Morris and Osage Counties--80-100% of soybean plants infected, severity light to heavy. (Sim). MISSOURI - Warren, St. Charles, Jefferson, Bollinger, Stoddard, and Pemiscot Counties--50+% of soybean plants with less than 0.5% of leaf area affected. (Foudin). IOWA - Soybean plants infected (and severity) by county: Tama--60% (trace to 10%), Benton--5% (trace), Clinton--20% (trace to 30%), Muscatine--30% (trace to 5%), Washington--80% (trace to 5%), Jefferson and Jasper--5% (trace). (Williams). NORTH DAKOTA - Cass and Richland Counties--100% of soybean plants in fields surveyed infected, severity 1-10%. (Jons). MINNESOTA - Almost all soybean fields showed 100% prevalence with 5-10% severity week ending July 15 to date. (Stromberg).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - KANSAS - Riley and Franklin Counties--infections 100% in fields surveyed. (Sim). IOWA - Soybean plants infected (and severity) by county week ending July 15: Monona 20% (trace to 5%), Crawford 20% (trace to 5%), Harrison 10% (trace to 5%). Currently: Washington--10% (trace to 10%) and Jasper--5% (trace). (Williams).

PHYTOPHTHORA ROOT ROT (Phytophthora megasperma) - MINNESOTA - Yellow Medicine County--1 soybean field with few spots of rot in low spots of field. (Stromberg). MICHIGAN - Shiawassee, Saginaw, and Gratiot Counties--destroyed most soybean seedlings week ending July 15. (Singh).

SOYBEAN BROWN SPOT (Septoria glycines) - MISSOURI - Callaway and Bollinger Counties-75% of soybean plants with symptoms on lower pair of trifoliate leaves. (Foudin). MICHIGAN - Shiawassee and Saginaw Counties--dark brown spots restricted on upper and lower surfaces of unifoliate leaves in commercial soybean fields week ending July 15. (Singh).

BLACK ROOT ROT (Thielaviopsis basicola) - MICHIGAN - Shiawassee, Saginaw, Gratiot, and Clinton Counties--infected most commercial soybean fields. Causal organism identified from root collections. Entire field infected in Gratiot County. (Singh).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - MISSOURI - Warren, St. Charles, Jefferson, and Bollinger Counties--all soybean plants with trace to 10% of leaf area affected. Plants began bloom or pod development. (Foudin).

SOYBEAN CYST NEMATODE (Heterodera glycines) - TENNESSEE - New county record: Maury County--infested 2 soybean fields, 1 near Glendale and 1 near Culleoka Communities, July 19, 1977. Collected by P.D. Foster. Determined by R.E. Harrison. Infested fields by county: Franklin--4 of 45 fields, Lincoln--7 of 17 fields, and Wilson--1. (Harrison et al.). KENTUCKY - New county record: Todd County--cysts on soybeans near Elkton July 16, 1977. Collected and determined by R.E. Stuckey. Many cysts on plant roots due to dry soil conditions. (Sloderbeck).

# INSECTS

BEET ARMYWORM (Spodoptera exigua) - ALABAMA - Marshall County-larvae of this species and YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) damaged 5-acre soybean field. (Wood). FLORIDA -Jackson County--S. exigua, CORN EARWORM (Heliothis zea), and FALL ARMYWORM (Spodoptera frugiperda) rapidly increased on soybeans, only late-planted fields required treatment due to insufficient foliage. (Linker). Alachua County--these 3 noctuids a problem on 60% of soybeans surveyed in northern area, treatment required. (Baker). GEORGIA - Southern and central areas--light to heavy infestations on small soybean plants week ending July 16 (Suber); Burke County--very heavy on small plants (Craven, Emmet). SOUTH CAROLINA - Pee Dee area--this species and a NOCTUID MOTH (Cirphis unipuncta) defoliated many soybean fields. (Griffith). Allendale County-S. exigua heavily damaged soybean fields countywide. (Griffin). NORTH CAROLINA - Robeson and Columbus Countiesinfested 60+ acres of soybeans 12 inches or shorter. Washington and Tyrrell Counties--10-43 per row ft on about 400 acres. (Carter et al.).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Lower Macon County--1st to third instars on 6 to 10-inch soybeans in several 200-acre fields; controls applied. Adult flight very heavy throughout area. (McQueen).

GREEN CLOVERWORM (Plathypena scabra) - KENTUCKY - Adults heavy in Lexington light traps; larvae expected to increase next 14 days. Daviess County--larvae 0.6-9.2 (averaged 3.0) per 10 sweeps in 7 soybean fields. Plants from late vegetative growth to bloom. Defoliation 5% or less in all fields. (Sloderbeck). INDIANA - Adults unusually heavy in light traps. (Judy). Southern district-larvae never more than 1 per yard of soybeans. (Meyer).

GARDEN WEBWORM (Loxostege rantalis) - KANSAS - Anderson County-larvae infested 50-100% of plants in 3 fields of 8 to 10-inch soybeans. (Hilbert). Stafford County--completely defoliated seedling soybeans in 1 field week ending July 15. (Poston).

BEAN LEAF BEETLE (Cerotoma trifurcata) - MISSISSIPPI - Counts per 25 sweeps of soybeans by county: Oktibbeha--2-3, Clay--5-7, Monroe--5-6, Chickasaw--3-6, Webster--1-2, and Calhoun--2-3. All soybeans in full bloom. Defoliation light. (Anderson). NORTH CAROLINA - Martin and Washington Counties--threshold level (35% foliar loss before bloom) in scattered soybeans, second generation has peaked. (Van Duyn).

MEXICAN BEAN BEETLE (<u>Epilachna</u> <u>varivestis</u>) - MICHIGAN - First significant record of <u>Mexican</u> bean beetles on soybeans in State (Ruppel)--adults and eggs found on soybeans in Montcalm County week ending July 15. (Crosby).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - MISSISSIPPI - Counts per 25 sweeps of soybeans by county: Oktibbeha--8-10 with 5% of plants girdled in field; Clay, Monroe, Chickasaw, Calhoun, and Webster--1-4. Soybeans in bloom and early pod set. (Anderson).

#### **PEANUTS**

#### INSECTS

NOCTUID MOTHS - ALABAMA - Southeastern area--FALL ARMYWORM (Spodoptera frugiperda), GRANULATE CUTWORM, (Feltia subterranea), VARIEGATED CUTWORM (Peridroma saucia), BEET ARMYWORM (S. exigua), and LESSER CORNSTALK BORER (Elasmopalpus lignosellus) very heavy in most peanut fields throughout the 200,000 acres. Houston County--1st-3rd instar S. frugiperda at 20 per ft of row along with other foliage and pod feeders in most of the 10,000+ acres. Control efforts general. (Mathews et al.). FLORIDA - Jackson County--S. frugiperda and CORN EARWORM (Heliothis zea) principal foliage feeders increasing to heavy populations on peanuts. These species and BEET ARMYWORM (Spodoptera exigua) constituted about 30% of the foliage feeders. Larvae averaged 12 per row ft in 90acre field at Malone, several samples averaged 30 larvae. (Linker). Averages per row ft by county: Alachua--fall armyworm 1 and corn earworm 5 on untreated soybeans at Archer; Levy--fall armyworm 2 and corn earworm nearly 3 in 40-day-old fields in northeastern area. (Mangold).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - Jackson County--still a problem on peanuts; fields treated 14-21 days ago, required retreatment. (Linker).

# COTTON

# INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county July 12-15: Cameron--adults 0-20 (heavy) and punctured squares 0-70 per 100 plants at Harlingen; Hidalgo--0-10 punctured squares per 100 plants; Willacy-0-10 punctured squares and 0-50 adults per 100 plants; Kleberg--0-79% damaged squares; Nueces--0-52% damaged squares; San Patricio--0-63% damaged squares; southcentral area -- 20-35% punctured squares common; Williamson and Milam--punctured squares increased, punctured 3-10% of older squares, 10-30% of squares at Magsfield, 101 adults per trap per week, migration increased, less than 15% punctured squares overall but 40-80% in some fields; Ellis and Navarro--0-60% punctured squares; Cottle, Fisher, Hardeman, Jones, and Wichita--0-5% punctured squares; Tom Green and Runnels--0-2 adults per trap per week: Motley--punctured squares 0-9% in control zone; Dickens--0 punctured squares in control zone; Kent--punctured squares 0-2 in control zone, 0-8 outside; Stonewall--1-28 punctured squares: Rolling Plains--infested 12% of most fields in control zone, 90% outside of control zone; Howard--0-55% damaged squares; Glasscock--2 adults per trap in north area. (Cocke et al.).

ARKANSAS - Northeastern area -- boll weevil continued very light. only occasional punctured square in cotton fields. (Kimbrough). MISSISSIPPI - Slight increase in damaged squares. Punctured squares (and adults in pheromone traps) by county: Leake--7% (14 adults in 12 traps) on 1,500 acres; Madison--2% on 3,000 acres; Newton--11% on 120; Lincoln--15% on 560; Tate--1% (2 in 5 traps) on 2,800; Lafayette--1% (2 in 3) on 2,000; Lee--1% on 800; Marshall, Pontotoc, Prentiss, Yalobusha, Webster, and Itawamba--less than 1%. (Anderson). ALABAMA - Northern area--populations and damage, 0-4% of squares, still light throughout 300,000+ cotton acres. Southern and central areas--adults and square damage increased in all of 125,000+ acres with isolated fields as far north as Lee County with 10-50% square damage in limited fields. (McQueen). TENNESSEE - Middle area--punctured squares 1-2% in infested cotton fields. (Cagle). GEORGIA - Counts in pheromone traps by county week ending July 16: Dooly--8 and Crisp 2. (Gray et al.).

BOLLWORMS (Heliothis spp.) - TEXAS - BOLLWORM (H. zea) and TOBACCO BUDWORM (H. virescens) counts on cotton by county July 10-19: Cameron--0-64 eggs, 0-41 larvae, and 0-25 damaged squares per 100 plants, heavy, at La Feria, Harlingen, and Brownsville; Hidalgo--0-200 eggs, 0-70 larvae, and 0-90 damaged squares per 100 plants, heavy, at Alamo and Donna; Willacy--0-39 eggs, 0-55 larvae, and 0-24 damaged squares per 100 plants; Kleberg--0-84 eggs and 0-29 larvae per 100 terminals, 0-31% damaged squares; Nueces--0-100+ eggs and 0-26 larvae per 100 terminals, 0-20% damaged squares; San Patricio--0-200+ eggs and 0-29 larvae per 100 terminals, 0-23% damaged squares; south-central area--0-85% H. virescens; Hill and Johnson--50-80 eggs (increased); Collin and Hunt up to 43 eggs and 0-12 larvae per 100 terminals; Ellis and Navarro--up to 60 eggs per 100 terminals, 2-44% larvae, H. zea light and H. virescens up to 201 per trap per night; Jones and Fisher--0-4 eggs and 0-3 larvae per 100 terminals, 5% damaged squares; Crosby--1-2 H. zea and zero H. virescens adults per trap

per night, few larvae in few fields; Castro and Lamb--few larvae in few fields, 5-15 and 25-30 Heliothis zea per trap per night in Castro County; Hale--14-21 H. zea per trap per night; Howard--H. zea 0, 12, 9, 28, and 78, and H. virescens 0, 2, 3, 0, and 2 per trap per night at Big Spring; Pecos and Reeves--0-9 eggs and 1-3 larvae per 50 terminals, 22 H. zea and 1.75 H. virescens per trap per night; El Paso--3-6% eggs and larvae in many fields, 6-15% and less than 8% damaged squares; El Paso Valley--2-3 eggs (20-25 eggs at Tornillo and Esperanza) per 100 terminals, 0-13% and less than 8% damaged squares; Howard and Reeves--15-20 H. zea and 2-4 H. virescens per trap per night; Howard, Glasscock, Martin, Reagan, Upton, MidTand, Pecos, Reeves, and El Paso--0-8 eggs, 0-2 larvae, and 0-5% damaged squares. (Robinson et al.).

ARKANSAS - Desha and Drew Counties -- H. zea and H. virescens continued to cause some problems. Desha County--about 30% of cotton fields treated, eggs averaged 20 and larvae 10 per 56 row ft, up to 89 eggs per 56 row ft in some fields. Drew County--up to 50 eggs and 2 larvae on 14 row ft in some fields. (Wall). MISSISSIPPI - Bollworms remained stable with increased treatment. Larvae in Delta counties: Coahoma--7% on 1,500 acres with high of 30%; Quitman--8% on 2,000, high of 25%; Sharkey--10% on 1,000 (eggs decreased); Tallahatchie--0-8% on 1,500; Sunflower--6% on 2,000, treated most fields; and Carroll--eggs and larvae light on 1,500. Larvae in northern counties: Itawamba--3% on 1,200 acres; Lafayette--2% on 2,000; Lee--2% on 800; Marshall--1.5% on 6,000; Pontotoc--1% on 200; Prentiss--3% on 600; Yalobusha--0.1% on 4,400; Monroe--4% (4-36% eggs) on 2,000; and Tate--3% on 2,800 (eggs very light). Larvae in central and southern counties: Clay--2% on 100 acres; Franklin-5% on 50; Leake-2% on 1,500; Madison-5% on 3,000; Montgomery--0.1% on 675 (0.5% egg); Newton--2% on 120; and Noxubee--0.3% on 3,600 (eggs light). (Anderson).

ALABAMA - Southern and central area--heaviest H. <u>zea</u> flight ever, adults 1-25 per 5,000 sq ft in all fields examined in all counties. Eggs 50-200 and larvae 1-100 per 100 stalks. Northern area--adult flights and egg laying light. (McQueen). TENNESSEE - Middle area--Heliothis sp. eggs 2-6 and larvae 4 per 100 cotton terminals in infested fields. (Cagle). Bollworms expected to increase. (Gordon, White). GEORGIA - H. <u>virescens</u> in pheromone traps by county week ending July 18: Dooly--17, Crisp--13, Turner--14, and Tift--17. Adults on "sugar line" on nights of July 11 and 14, respectively: 51 and 43 H. <u>virescens</u>, and 83 and 67 H. <u>zea</u>. (Emery, Lambert). SOUTH CAROLINA - Pee Dee area--Heliothis spp. eggs 100-300+ per 100 cotton plants. (Griffith).

BEET ARMYWORM (Spodoptera exigua) - SOUTH CAROLINA - Marion and Marlboro Counties--heavy on cotton, infested 8-10, up to 20-30, squares per 100 plants. (Griffith).

CABBAGE LOOPER (Trichoplusia  $\underline{ni}$ ) - TEXAS - Counts on cotton by county July 13-15: Williamson and Milam--increased, very heavy defoliation in 1 field at Thrall; Pecos and Reeves--fewer than 1 per 100 plants. (Glodt et al.)

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - Counts per 100 cotton plants by county July 13-18: Collin and Hunt--up to 93; Rolling Plains area--5-25, decreased in most fields; Tom Green and Runnels--0-15; Pecos and Reeves--less than 1; El Paso Valley area--less than 3%. (Ruth et al.).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - "Hill section" cotton infested with 1-6% in majority of fields. Delta counties--infestation 2-10% with few "hotspots" of 30-40% in most fields in Coahoma and Tallahatchie Counties. (Anderson).

#### **TOBACCO**

# INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - TENNESSEE - Washington, Johnson, Hawkins, Greene, and Jefferson Counties--heavy populations damaged small late tobacco. Larvae destroyed up to 50% of individual plants in some fields. (Burgess). KENTUCKY - Central and Bluegrass regions--larval damage to tobacco continued, problems reported in 20+ counties. Infestations of 40-50% noted. (Gregory, Sloderbeck).

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Trousdale, Smith, Sumner, Wilson, and Macon Counties--larvae 0-769 per acre (above control level) in 14 of 30 tobacco fields week ending July 15. Currently, larvae 0-800 per acre in 18 of 28 fields. (Gregory).

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Trousdale, Smith, Sumner, Wilson, and Macon Counties--larvae 0-556 per acre (above control level) in 10 of 30 tobacco fields week ending July 15. (Gregory).

#### MISCELLANEOUS FIELD CROPS

# INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - Pecos and Reeves Counties--9-15 per sunflower head July 14. (Foster). KANSAS - Anderson, Franklin, and Johnson Counties--larvae infested 5-50% of sunflower heads (90% to full bloom); adults averaged 3-20 per 150 row ft. (Hilbert). Harvey County--up to 150 larvae in sunflower heads in 1 field. (Nuttelman). MINNESOTA - Yellow Medicine and Redwood Counties--infested 40-50% of 2 sunflower fields. (Sreenivasam).

AN OLETHREUTID MOTH (Suleima helianthana) - CALIFORNIA - Fresno County--2nd instar larvae heavy on leaves and flower bracts of sunflowers at Fresno. Not normally found in area. Treatment required. (Dunnegan). TEXAS - Castro and Lamb Counties--infested up to 20% of sunflowers July 12. (Moore).

#### POTATOES, TOMATOES, PEPPERS

# DISEASES

ALTERNARIA EARLY BLIGHT (Alternaria solani) - MICHIGAN - Severe foliar damage on well-sprayed potatoes in several areas. Susceptibility increased by early maturity induced by drought-stress and nutrient deficiencies caused by dry soil. (Potter, Laemmlen).

#### INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - IOWA - Muscatine County-feeding damage moderate on commercial potatoes July 18. Cutworms on surface of soil under plants ranged 1.5-3.5 cm long. After shaking plant foliage, up to 12 (averaged 4) larvae per 0.09 sq m on soil. (Lewis). WISCONSIN - Spring Green area--up to 3 per sq ft of potatoes. (Lovett).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - OREGON - Crook County near Prineville and Jefferson County near Madras and Culver--damage in several potato fields, all stages present and generally concentrated along field margins. Isolated plants completely defoliated. Second generation adults emerged with locally heavy egg concentrations. (Penrose). COLORADO - Larimer County--adults 43 on 10 ft of row in potatoes. (Capinera).

#### REANS AND PEAS

# DISEASES

PHASEOLICOLA HALO BLIGHT (Pseudomonas phaseolicola) - MICHIGAN - Outbreaks in many red kidney and cramberry bean fields throughout bean areas. (Saettler, Laemmlen).

#### **CUCURBITS**

# INSECTS

WESTERN CORN ROOTWORM (<u>Diabrotica virgifera</u>) - NEW MEXICO - New county record. Hidalgo-taken from melon and squash plants at Virden July 21, 1977. Collected and determined by W. Iselin. (Iselin).

#### GENERAL VEGETABLES

#### DISEASES

ASPARAGUS RUST (<u>Puccinia</u> <u>asparagi</u>) - MICHIGAN - Oceana County--uredial stage increased very rapidly due to warm, rainy weather. (Lacy).

#### DECIDUOUS FRUITS AND NUTS

#### DISEASES

APPLE SCAB (Venturia inaequalis) - WISCONSIN - Kewaunee and La Crosse Counties--secondary cycles continued to develop in orchards and ornamentals. Weather is rainy. (Lovett).

#### INSECTS

CODLING MOTH (Laspeyresia pomonella) - IDAHO - Males in pheromone trap by county: Latah--4 on July 7, 5 on July 8, 2 each on July 11, 13, and 14, 3 on July 16, and 1 on July 19 at Moscow (Portman); Twin Falls--5 from June 20 to July 13 at Twin Falls (Stoltz). COLORADO - Mesa County--second generation adults averaged 2-11 per pheromone trap per day, June 25-30. (Bulla). NEW MEXICO - Lincoln County--heavy in 10-50% of untreated apples in Hondo Valley. Treated trees show little damage, but some MCDANIEL SPIDER MITE (Tetranychus mcdanieli) buildups due to chemical spraying for codling moth. (Riddle).

FALL WEBWORM (<u>Hyphantria cunea</u>) - NEW HAMPSHIRE - Rockingham County--first larvae of season on apple trees at Northwood July 13. Mostly 1st and 2nd instar. (Turmel, J.F. Burger).

TWOSPOTTED SPIDER MITE (<u>Tetranychus urticae</u>) - COLORADO - Mesa County--buildups in apple and pear orchards, averaged 2-5 per leaf. (Bulla).

PECAN SPITTLEBUG (Clastoptera achatina) - SOUTH CAROLINA Kershaw County--heavy on pecans, 10-20% of crop destroyed, controls recommended. (Pollet).

#### **SMALL FRUITS**

#### INSECTS

WESTERN GRAPELEAF SKELETONIZER (<u>Harrisina</u> <u>brillians</u>) - CALIFORNIA - Fresno County--adults laying eggs on backyard grapes to begin second generation at Fresno. (Dunnegan). NEVADA - Clark County--larvae light on grapes north of Moapa, a new area, week ending July 15. (Bechtel et al.).

#### **ORNAMENTALS**

#### INSECTS

AN ARMORED SCALE (<u>Abgrallaspis cyanophylli</u>) - FLORIDA - New host record for State. St. Lucie County--nymphs and adults moderately infested leaves of <u>Lyonia ferruginea</u> plant in residence at Fort Pierce, June 21. (Campbell).

AN ARMORED SCALE (Pseudoparlatoria ostreata) - FLORIDA - New host record for State. Broward County-all stages infested roots and stems of Eupatorium capillifolium (dogfennel Eupatorium) in nursery at Plantation, June 30. (Felty, Lowery).

GREENHOUSE WHITEFLY (<u>Trialeurodes vaporariorum</u>) - FLORIDA - New host record for State. <u>Alachua County--larvae</u> and adults scattered on leaves of 10% of 20 <u>Saintpaulia ionantha</u> (common African violet) plants in nursery at <u>Gainesville</u>, <u>June 29</u>. (Lieberman).

#### FOREST AND SHADE TREES

#### INSECTS

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - OREGON - Umatilla County--third and final treatment completed on ornamental pines at Hermiston, Umatilla, McNary Manor, Hat Rock, and a golf course, about 8,000 trees treated. Columbia County-new county record. 2 adults in 1 pheromone trap in nursery at Scappoose, July 21, 1977, collected and determined by F.P. Larson. Larvae damaged 3 of 137 yard trees in this county; no infestations or damage in surrounding residential area. (Larson).

SOUTHERN RED MITE (Oligonychus ilicis) - TENNESSEE - Franklin and Coffee Counties--infested and damaged 28 acres of <u>Juniperus</u> horizontalis 'Plumosa', controls planned. (Cagle).

FALL WEBWORM (Hyphantria cunea) - ARKANSAS - Washington County-larvae still unusually heavy for time of year, particularly on persimmon, walnut, and redbud trees. (Mayse).

#### MAN AND ANIMALS

#### INSECTS

MOSQUITOES - MINNESOTA - Metropolitan Mosquito Control District light trap collections July 9-16: Aedes vexans dominant, followed by Culex tarsalis. Trap collection week of July 9 contained high proportion of males, indicating new brood of mosquitoes emerged. (Sreenivasam). OHIO - Circleville, Pickaway County, and Barberton, Summit County--2 nestling pigeons seriologically positive for ST. LOUIS ENCEPHALOMYELITIS VIRUS. (Berry).

HORN FLY (<u>Haematobia irritans</u>) - NEW MEXICO - Catron County--150-200 per head near Beaver Head. (Staff).

TABANID FLIES - UTAH - Box Elder County--very heavy and annoying at Locomotive Springs and heavy at Kelton. Chrysops aestuans, C. discalis, C. fulvaster, Hybomitra sonomensis, Tabanus productus, and T. punctifer principal species July 12. (Knowlton, Davis). Cache County--unusually heavy at Providence (Thatcher) and Mendon (Knowlton). NEW HAMPSHIRE - Southern half of State--Chrysops spp. adults became very heavy week of July 11, especially July 16-17. About 10 species now active in most areas. Strafford County--Chrysops vittatus, C. geminatus, C. aberrans, and C. univittatus about 90% of catch at Durham July 16-18. (J.F. Burger).

# BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

A EULOPHID WASP (Tetrastichus julis) - Recoveries of 20+% parasitized <u>Oulema melanoplus</u> (cereal leaf beetle) larvae by State and county, 1 oat field each, May 12 to July 6. OHIO - Guernsey--24% in Jefferson Township, Geauga--50% in Huntsburg, Burton, and Claridon Townships and 33% in Middlefield Township. VIRGINIA - Highland--50% in Stonewall Magisterial District. NEW JERSEY - Warren--50% in Harmony Township. (T.L. Burger). NEW YORK - New county record. Sullivan County--parasitized 100% of <u>Oulema melanopus</u> (cereal leaf beetle) larvae in 1 oat field in <u>Liberty Township</u>, July 5, 1977. Collected by M. Brinckerhoff. Determined by V. Montgomery. (T.L. Burger).

AN APHIDIID WASP (<u>Lysiphlebus testaceipes</u>) - KANSAS - Parasitism of <u>Schizaphis graminum</u> (greenbug) by county: Brown--90-95% in some sorghum fields; Atchison--10% in 1 sorghum field; Riley, Jefferson, Anderson, Coffey, Douglas, and Osage Counties--trace. (Bell et al.).

A WEEVIL (Rhinocyllus conicus) - INDIANA - Johnson, Switzerland, and Jefferson Counties--600 adults released to control  $\underline{\text{Carduus}}$  nutans (musk bristlethistle). (Clarks).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

OAT STEM RUST (Puccinia graminis var. avenae) - NORTH DAKOTA - Percent of severity/prevalence on oat plants by county: Richland-25/100, Cass--25/100, Sargent--25/100, Ransom--20/100, Dickey--20/100, LaMoure--20/100, McIntosh--10/100, Logan--10/100, Emmons--5/100, Burleigh--1/100, Kidder--1/100, Stutsman--1/100, Foster--1/25, McLean--1/25, Wells--1/25, Sheridan--1/25, and Eddy--1/25. Yield losses probably will be slight in most fields where oats in mid-dough or beyond, and significant where oats in early milk or younger. (Jons).

DUTCH ELM DISEASE (Ceratocystis ulmi) - OREGON - First new county record west of Cascade Mountains. Multnomah County--branch samples collected from a 30-year-old American elm at Overlook Park, Portland, by A. Wynstra July 14, 1977. Graphium (imperfect) stage isolated and determined by F. Zeitoun. Tree removed July 20, chipped, and buried. (Zeitoun, Penrose).

#### INSECTS

GRASSHOPPERS - WASHINGTON - Asotin, Columbia, Spokane, and Whitman Counties--Melanoplus spp. economic infestations still a problem. Parts of eastern Adams County--becoming infested. (Hintze). COLORADO - Weld County--35 grasshoppers per sq yd in rangeland. (Urano). ARKANSAS - Washington County--Melanoplus differentialis adults up to 100 per sq yd in 1 orchardgrass pasture near Strickler. (Mayse).

NORTH DAKOTA - McKenzie County--4,160 acres of rangeland treated June 22 with a carbamate oil for grasshoppers; Billings, Golden Valley, and McKenzie Counties--119,232 acres of range treated July 7-12 with an ultra low volume organic phosphate. Control effective. (Winks). Adult cropland survey completed (172 stops made) in following counties July 22. Williams, McKenzie, Dunn, and Stark Counties--light to threatening in 16 of 101 stops, 1 stop rated threatening to severe; few alfalfa fields had 3-4 adults per sq yd while 1 field had up to 10 per sq yd. Camnula pellucida, Melanoplus bivittatus, and M. packardii dominant. No crop damage. Counts per sq yd by county: McHenry (37 stops)--field counts 0-7 (averaged 2), marginal counts 0-8 (averaged 2.5), 13 stops rated light to threatening; Pierce (24 stops)--field counts 0-5 (averaged 1.5), marginal counts 1-7 (averaged 2), 5 stops rated light to threatening. M. bivittatus, M. sanguinipes, M. dawsoni, some M. packardii, and M. femurrubrum dominant. (Brandvik, Scholl).

MINNESOTA - Grasshoppers per sq yd of alfalfa by district: West-central and central--some localized "hotspots," 10-12 in southern one-fourth of Swift County, 10-16 in 1 field near Warwick, Kandiyohi County, 10-15 in 1 field and 20-30 in margins in Meeker County, roadside alfalfa had been mowed; southwest and southeast-averaged 4 and 2 respectively. M. bivittatus, M. femurrubrum, and some M. differentialis 2nd instars to adults most common. (Sreemivasam).

GYPSY MOTH (Lymantria dispar) - PENNSYLVANIA - Total defoliation is 1,275,420 acres as seen in aerial surveys of 28 counties in June 1977. Moderate defoliation, 30-60%, covered 543,541 acres. Heavy defoliation, 60+%, covered 731,879 acres. (Nichols).

JAPANESE BEETLE (<u>Popillia japonica</u>) - KENTUCKY - Eastern Madison, Estill, northern Boone, and northwestern Kenton Counties--adults fed heavily on corn silks in several fields. Adults trace to 5 per plant (depending on stage of corn and location of field) in eastern Madison County; clipped silks on 80% of ears in 1 area. Adults averaged 2.4 per plant and heavy silk damage on 30% of ears in 1 Boone County field. Several fields reaching silking stage. (Sloderbeck). OHIO - Lorain and Stark Counties--adult feeding heavy on blueberry foliage and fruit. Ashtabula County-damaged commercial Concord grapes at Geneva for first report of grape damage in this county. (Williams).

PINK BOLLWORM ( $\frac{\text{Pectinophora}}{\text{Reeves Counties}}$  -fewer than  $\frac{1}{1}$  per  $\frac{100}{1}$  cotton plants July 14. (Foster).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Northeastern area--controls almost completed. About 275,000 acres in Union, Harding, Colfax, and Mora Counties sprayed. Early assessment indicates excellent control. South-central area--egg hatch in Lincoln County 40-90%, depending on rainfall. Total of 1 million acres infested in this county. (Lucht).

SCREWWORM (Cochliomyia hominivorax) - Six cases reported from continental United States July 3-9 as follows: Texas 1 and Arizona 5. (Meadows). Total of 146 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 872 cases reported in Mexico south of Barrier Zone (Williams, Smith). Number of sterile flies released this period totaled 123,623,000 as follows: Texas 92,625,200, New Mexico 5,787,000, Arizona 25,210,800. Total of 151,759,200 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### WEEDS

HYDRILLA (Hydrilla verticillata) - CALIFORNIA - New county record. Riverdale County-detected in small private water lily pond at Coachella, by L. Davis and J. St. Amant, July 11, 1977. Confirmed by D. Barbe. Grown for last 10 years as packing material to ship snails. (Keffer).

# HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) heavily mined 80% of leaves in 0.5 acre of pole beans at Sunset Beach, Oahu. CARMINE SPIDER MITE (Tetranychus cinnabarinus) heavy in 0.25 acre of pole beans and 5,000 sq ft of togan squash. SOUTHERN GARDEN LEAFHOPPER (Empoasca solana) heavy (80% of leaves; 10-60 nymphs and adults per leaf) in 0.25 acre of pole beans. PEPPER WEEVIL (Anthonomus eugenii) and BROAD MITE (Polyphagotarsonemus latus) counts and damage heavy on 0.5 acre of chili pepper. All terminals affected by P. latus and flower production practically nil. (L. Nakahara).

Ornamentals - New host records for a MEALYBUG (Pseudococcus obscurus) in State. Heavy on Ligularia tussilaginea (Farfugium) and light to moderate on Aglaonema sp., Ixora sp., and Dieffenbachia sp. at Honolulu International Airport, Oahu. Collected by R. Kunishi, W. Nagamine, and L. Nakahara, June 23, 1977. Determined by J.W. Beardsley. (Kunishi et al.).

#### DETECTION

NEW COUNTY RECORDS

# DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - OREGON - Multnomah. (p. 571).

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - TENNESSEE - Maury; KENTUCKY - Todd. (p. 563).

#### INSECTS

A EULOPHID WASP (<u>Tetrastichus julis</u>) - NEW YORK - Sullivan. (p. 571).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - OREGON - Columbia. (p. 570).

A JAPANESE WEEVIL (<u>Calomycterus</u> <u>setarius</u>) - WEST VIRGINIA - Monroe County--adults nuisance around outside walls of 3 homes at Pickway. Collected by R. Spencer, July 1, 1977. Determined by J.D. Hacker. (Hacker).

WESTERN CORN ROOTWORM (<u>Diabrotica virgifera</u>) - NEW MEXICO - Union (p. 559) and Hida<del>lgo (p. 568); TEXAS - Hale (p. 559); ILLINOIS - Wayne, Fayette, Madison (p. 559); INDIANA - Monroe, Lawrence, Martin, Daviess, Scott (p. 560).</del>

# WEEDS

HYDRILLA (<u>Hydrilla</u> <u>verticillata</u>) - CALIFORNIA - Riverdale. (p. 573).

#### CORRECTIONS

CPPR 2(27):494 - A EULOPHID WASP (Tetrastichus julis) - INDIANA - Pulaski--100% ... should read INDIANA - Porter--100% ...

CPPR 2(27):495 - PENNSYLVANIA - Delete entry for Lawrence. (DeWitt).

CPPR 2(29):541 - A EULOPHID WASP (Tetrastichus julis) - PENNSYLVANIA - Entry for Pickaway should be placed under OHIO. Entry for Pulaski should be under VIRGINIA.

CPPR 2(29):543 - AN ICHNEUMONID WASP (Diaparsis sp.) - Add "Lawrence ... Plain Grove\* ... J. Lilley ... July 17 ... V. Montgomery"

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# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

Desti- nation	USA	HI	USA	CA	ore MD	lle SC	CA	CA
Port of Entry	Dover	Hawaii	Kennedy Airport	Los Angeles	Baltimore	Greenville	Los Angeles	Los Angeles
Probable Origin	West Germany	American Samoa	Venezuela	Peru	West Germany	France	Argentina	Japan
Host	in holds of military aircraft	in holds of military aircraft	in coffee berries from baggage	in peppers from baggage	in wood crates of castings	in wood crates of wire	on bromeliad plants from cargo	on Zelkova plants from cargo
Life Stage	adult	adult	larval	larval	adult	adult	juvenile	adult
	Amphimallon solstitialis (Linnaeus) summer chafer Det. E.J. Ford	Anticarsia irrorata (Fabricius) a noctuid moth Det. E.L. Todd	Ceratitis capitata (Wiedemann)  Mediterranean fruit fly  Det. R.H. Foote	Contarinia sp. a midge Det. R.J. Gagne	<pre>Hylungops palliatus (Gyllenhal) a scolytid beetle Det. E.J. Ford</pre>	<pre>Xylotrechus rusticus (Linnaeus)     a cerambycid beetle     Det. T.J. Spilman</pre>	Helix pomatia Linnaeus a helicid Snail Det. R. Munkittrick	Succinea horticola Reinhardt a succinid snail Det. R. Munkittrick







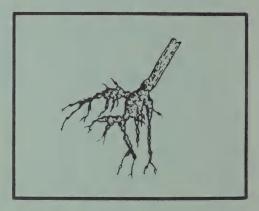


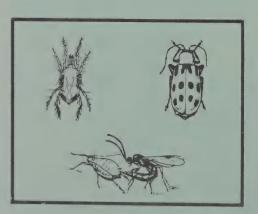
UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

Official Business Penalty for Private Use, \$300











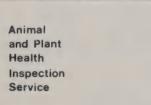
1/53 VOL. 2 NO. 31

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August 5, 1977

# Cooperative **PLANT** PEST **REPORT**





U.S. DEPARTMENT OF AGRICULTURE





This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
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U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

We cannot make address changes unless we have your mailing code

# **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

#### Current Conditions

GREENBUG averages of 100+ per sorghum plant in Panhandle of Oklahoma and southwestern and eastern Kansas. (p. 581-582).

POTATO LEAFHOPPER economic on alfalfa in west-central Ohio. One or more per sweep of alfalfa in central New Jersey and parts of New York. (p. 582).

MAIZE DWARF MOSAIC VIRUS reported in corn from southern one-third of Illinois. (p. 583).

Mainly FALL ARMYWORM heavy on corn, grain sorghum, other grasses, and peanuts in parts of Mississippi, Alabama, Florida, and North Carolina. (p. 584-585, 587, 590).

VARIEGATED CUTWORM damaged alfalfa in northeastern and central Iowa and southern Minnesota. (p. 587). Problems in potatoes in Central Sands, Wisconsin, and in tomatoes in Ohio. (p. 593-594).

SOYBEAN MOSAIC VIRUS reported in soybeans in northeastern Nebraska and various parts of Illinois. (p. 589).

OAT STEM RUST 100% prevalent in surveyed oats in east-central, northeastern, and north-central North Dakota and northwestern Minnesota. More prevalent in Wisconsin than in 1976. (p. 598).

#### Detection



Adults of ORIENTAL FRUIT FLY detected in Orange and Los Angeles Counties, California. (p. 601).

New State records include WILLOW SHOOT SAWFLY in Mississippi (p. 596) and an ICHNEUMONID WASP in Massachusetts (p. 597).

For new county records, see page 601.

# Special Reports

Orthotylus nassatus, a European Plant Bug New to North America (Heteroptera: Miridae) (p. 605-608).

Reports in this issue are for the week ending July 29 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

BEET LEAFHOPPER (<u>Circulifer tenellus</u>) - CALIFORNIA - Merced, San Joaquin, and Stanislaus Counties--treatment of weeds along roadsides completed last period. Counts up to 6 per sweep on some weeds. (Tyson).

CORN EARWORM (Heliothis zea) - OKLAHOMA - Counts by county week ending July 22: Garvin-in 40-90% of corn ears in fields; Pontotoc--heavy. (Arnold). ARKANSAS - Larvae by county: Miller-economic levels on sorghum heads (Barnes); Jackson and Desha--0.1 per 3 row ft of soybeans (Dumas). KANSAS - Number of primary corn ears infested by county: Pawnee--up to 30% of ears in late milk to early dent corn, 30% of ears infested earlier but larvae had pupated; Gray--5% in 1 field. (Mock). ALABAMA - Corn earworm larvae per row ft of soybeans by county: Macon--small larvae 3+ on leaves in 80-acre field; Coffee and Geneva--l-2 in many fields, no economic damage. (Gary et al.). FLORIDA - Alachua County--males decreased to 60 per night in pheromone traps at Gainesville. (Mitchell).

SOUTH CAROLINA - Pee Dee area--problems with corn earworm and BEET ARMYWORM (Spodoptera exigua) on soybeans, several fields in Darlington County had infestations up to 30-40%. (Griffith). NORTH CAROLINA - Movement of corn earworm adults from corn to soybeans building toward peak. Statewide--laying eggs on soybeans. Most activity in fields with open canopies and at peak bloom. Egg laying so heavy this year, economic threshold levels may occur in any field. Drought stress caused most fields to have open canopies. Southern and eastern Coastal Plain--hatching begun. (Wells, Hunt).

VIRGINIA - Tidewater Region--corn earworm larvae in 38.4% of all 750 field corn ears in 30 fields. Number of corn ears infested (compared with number in 1976) by section: South of the James River--37.2% (39.2%); Middle peninsula--56.10% (30.8%); Northern Neck--22.0% (11.6%). Most larvae near pupation. Potential for serious infestation in the Tidewater soybean crop. Dry weather made plants smaller, less thrifty, and less able to overcome insect damage, and allowed greater survival of corn earworms which will move from corn to soybeans. (Allen). PENNSYLVANIA - Delaware County--larvae on sweet corn past 21 days, infestation heaviest at 20%. (Tetrault). NEW YORK - Long Island area--first blacklight trap catches July 12-18. (Semel).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Counts by county week ending July 22: Garvin-up to 50 per corn leaf; Muskogee--averaged 5 per sorghum plant. (Arnold).

GREENBUG (Schizaphis graminum) - TEXAS - Counts per sorghum plant by county July 8-14: Deaf Smith--500 per plant on plants 18-24 inches tall; Castro--100 on 18-24 inches; Parmer--20 on 14-20 inches; Oldham--400 on 18-22 inches; Randall--250 on 14-22 inches; Swisher--50 on 10-24 inches; Briscoe--10 on 8-12 inches; Floyd--150 on 8-16 inches; Hutchinson--5 on 12-16 inches; Hansford--500 on 14-20 inches; Sherman--300 on 10-18 inches; Moore--300 on 18-26 inches; and Potter--100 on 18-24 inches. (Daniels).

OKLAHOMA - Greenbug averages per sorghum plant by county week ending July 22: Texas--150 in plots of susceptible varieties and 35 in resistant plots; Muskogee--10. Current counts per sorghum plant by county: Cimarron--100-1,500 (averaged 250) and 50-500 (averaged 100) in 2 fields of 24-inch grain sorghum and 0-300 (averaged 50) in 1 headed field; Texas--1,000-4,000 (averaged 2,000) in plots of susceptible sorghum; Beaver--50-90 on occasional plants in 1 field, parasitism 0-2%; McCurtain and Muskogee--greenbugs very light. (Arnold).

KANSAS - Grant, Seward, and Stevens Counties--averaged 10-200 per plant on 12-inch bloom stage sorghum, some flight activity in later-planted fields not previously infested (Shuman); averaged 1,000 per plant in 1 sorghum field in Stevens County (Mock). Marshall, Washington, Republic, Jewell, Smith, Phillips, Norton, and Rooks Counties--averaged 5-90 per plant on dryland sorghum 4 inches to mid-bloom stage, some flight activity. (Bell). Riley County--averages up to 1,700 per plant generally decreasing due to parasitism. (Morgan, Bell). Osage, Shawnee, Franklin, Coffey, Anderson, Bourbon, Linn, Miami, Douglas, and Jackson Counties-averaged 0-280 per 2-inch to blooming plant, parasitism generally increasing rapidly in area. Infestations at treatment levels on some late-planted sorghum; greenbug buildups sometimes rapid due to heavy flight activity. (Hilbert). Southeastern area--problems sorghum mostly restricted to late-planted fields; counts up to 1,500-2,000 per plant in 1 field of postbloom sorghum in Elk County now decreasing due to parasitism. (Kilgore).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Many potatoes in unsprayed gardens succumbed to "hopperburn." Leafhoppers by area: Spring Green--0-8 per 10 sweeps; Central Sands--trace on potatoes, adults and nymphs variable on snap beans. (Lovett). INDIANA - Counts per sweep of alfalfa by district: South-central--0.01-0.92 in 22 alfalfa fields, 50% nymphs in 1 field, adults generally heavier than nymphs by 3-4 times (Anderson); central-adults economic, averaged 0.9 in 6-inch field in Morgan County and 1.3 in 8-inch field in Johnson County (Meyer). OHIO - West-central area--economic in most alfalfa, 10.6 per sweep in 1 field in Darke County, "hopperburn" in most alfalfa fields in Darke and Preble Counties. (Drees). Lorain County--severely damaged potato plants. (Miller).

MARYLAND - Frederick, Baltimore, and Carroll Counties--potato leafhopper averaged less than 1 per sweep of alfalfa, 3 per sweep in some heavily infested fields, no yellowing. (Hellman, Pinto). PENNSYLVANIA - This species and JAPANESE BEETLE (Popillia japonica) most common insects on grapes July 22. E. fabae at 24% of locations, marginal yellowing and downward cupping of leaf on tip growth. (Jubb). NEW JERSEY - Adults and nymphs per 25 sweeps of alfalfa by county: Burlington--92 at Columbus and 86 at Bordentown; Mercer--72 at Yardville; and Monmouth--78 at Allentown and 67 at Clarksburg. (Vasvary). NEW YORK - Statewide--increased on alfalfa July 8-21. Adults and nymphs about 1 per sweep in Seneca and Tompkins Counties. (Willson).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEVADA - Range per sweep of seed alfalfa by county: Pershing--15-39 on 120 acres at Lovelock (Munk); Humboldt--2-10 on 40 acres at Jungo (Stitt).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - Alachua County--males 8-34 per night in electric grid traps baited with virgin females in 1 tobacco field near Alachua July 25-28. (Mitchell). NORTH CAROLINA - Lenoir County--threshold level in 22 of 259 tobacco fields. Heaviest infestation at 33% (averaged 5%). Bladen County-threshold level in 29 of 144 fields. Heaviest infestation at 20% of plants. (Harper).

TOMATO HORNWORM (Manduca quinquemaculata) - NORTH CAROLINA - Granville County-5 of 36 tobacco fields at threshold, 4th and 5th instar larvae heavy, 146 per 100 plants. (Baumhover).

#### CORN, SORGHUM, SUGARCANE

# DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Prevalence in corn by county: Jackson 80%, Doniphan 20%, Brown 20%, and Jefferson 50%. (Sim). NEBRASKA - Southeastern area--prevalence usually 80-95%, severity mostly trace to 1% in almost every corn field surveyed. (Poe). ILLINOIS - Prevalence in commercial corn fields surveyed by county July 5-15: Richland, White, Pope, Jackson, Saline, Jefferson, Washington, Clinton, Marion, Clay, Effingham, Moultrie, and Piatt 8-15%; damage to leaf surface 1-3%. (Jordan, Shurtleff).

COMMON SMUT (Ustilago maydis) - NEBRASKA - Northeastern area-usually in less than 1% of corn plants in most fields. (Poe). ILLINOIS - Prevalence in commercial corn fields surveyed by county July 5-15: Douglas, Coles, Cumberland, Richland, Jackson, Hamilton, Jefferson, Washington, Clinton, Marion, Wayne, Clay, Shelby, Moultrie, and Piatt Counties--3-10%; 2 fields in Pope County and 1 field in Clay County--40-50%. (Jordan, Shurtleff).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - ILLINOIS - Richland, White, Pope, Jackson, Randolph, Williamson, and Saline Counties--infected 1-5% of corn in commercial fields surveyed July 5-15. (Jordan, Shurtleff).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - NEBRASKA - Antelope County--some spots on an inbred female parent line in hybrid seed corn field. (Poe).

STEWART'S WILT (Erwinia stewartii) - ILLINOIS - Richland, Randolph, and Jackson Counties--infected 2-5% of commercial corn in fields surveyed July 5-15. (Jordan, Shurtleff).

MAIZE DWARF MOSAIC VIRUS - ILLINOIS - Prevalence in commercial corn in fields surveyed by county July 5-15: White, Pope, Pulaski, Alexander, Jackson, Randolph, and Williamson--8-20%; Shelby--35-95% in 3 fields. Identified as SCMV strain MDMV-A since Johnsongrass, inoculated with plant sap from field samples, displayed disease symptoms. (Jordan et al.).

WHEAT STREAK MOSAIC VIRUS - ILLINOIS - Jackson County--isolated from corn sample collected June 5-15. (Ford et al.).

MOSAIC DWARF AGENT - MINNESOTA - Northwestern area--found in 3 of 7 corn fields in Roseau, Clearwater, and Pope Counties. Prevalence about 3-5%. Associated with heavy aphid populations in all cases. (Stromberg).

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Pawnee County--larvae averaged up to 10-12 per cornstalk in 1 field near Larned, 10% stalk breakage below ears due to first generation damage and high winds; larvae infested 80% of stalks in second corn field. Gray County--second generation larvae infested 5-35% of primary ears in 3 corn fields near Ingalls. (Mock). MISSOURI - North-central and central areas--second generation egg masses 0-24 and 4-72 (averaged 5.4 and 13.3) per 100 corn plants in 5 counties week ending July 23. (Munson). ILLINOIS - Western area-larvae as far north as Henderson County. Northwest, west, west-southwest, and east-southeast districts--potential very high for second-brood damage. (Black).

MINNESOTA - Over 50% of second generation European corn borer emerged in some districts, still heavy in light traps. Rochester, Olmsted County, reported high counts of egg masses in sweet corn. Successful second generation imminent. Average numbers of infested plants/numbers of larvae per 100 corn plants by district: Northwest--1/3, west-central--7/11, central--6/6, and southwest 8/10. (Sreenivasam). WISCONSIN - Statewide--adults in blacklight traps still heavy at many locations; 2nd instar larvae of summer generation on field corn in Grant County. Pupation completed in Dunn, Barron, Chippewa, and Eau Claire Counties. (Lovett). PENNSYLVANIA - Delaware County--first brood adults averaged 75 per blacklight trap per week for past 14 days. (Tetrault).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Statewide-larvae increased on corn, grain sorghum, and pasture grasses. Claiborne County--heavy on 100 acres of pasture, damage moderate. Chickasaw County--heavy with moderate defoliation on 50 acres of grain sorghum. Covington and Pearl River Counties -- larvae fed on millet with extensive damage. Washington and Oktibbeha Counties -significant increase of adults past 7 days. (Jarratt, Lambert). ALABAMA - Marengo County--very heavy on corn and grain sorghum over most of county. Controls needed countywide; some fields had 2 applications. South and central areas -- all larval instars very heavy on corn and grain sorghum, 1-6 larvae per stalk or ear very common, even in maturing corn. Larvae 2-35 per row ft in many millet fields in Pike and Geneva Counties. (French et al.). FLORIDA - Panhandle area--worst population of mainly fall armyworm with BEET ARMYWORM (S. exigua), SOUTHERN ARMYWORM (S. eridania), and YELLOWSTRIPED ARMYWORM (S. ornithogalli). Damage to corn and sorghum heavy. (Tappan). Alachua County--fall armyworm decreased, averaged 200 per electric grid trap baited with pheromone at and near Gainesville July 27. (Mitchell).

NORTH CAROLINA - Statewide--fall armyworm very severe on late corn, larvae averaged 3 per plant in 30-acre fields, damage in Buncombe, Franklin, Wayne, Johnston, Tyrrell, Edgecombe, Person, and Alamance Counties. Franklin County--infested 100% of 8 late corn fields. Infestations on about 5% of plants to 3 larvae per

plant. (Hardison et al.). MARYLAND - Eastern Shore counties--mid and late instar larvae of fall armyworm infestations scattered throughout area in sweet and field corn, damage ranged from light at field edges up to 50% of sweet corn plants infested at Salisbury, Wicomico County. Outbreaks 14-21 days early and may indicate advanced adult migration due to hot weather or random displacement due to unusual wind patterns. (Hellman, Pinto). PENNSYLVANIA - Lancaster, Bucks, and other southeastern counties--larvae on sweet corn July 17-28. Infestation heaviest at 25%. (Tetrault).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - OKLAHOMA - New county record. Texas County--adults collected in blacklight trap at Guymon by B. Massey, July 16, 1977. Determined by B. Massey and D.C. Arnold. Currently, small larvae light in corn tassels in 1 field in northern edge of this county. (Arnold). KANSAS - Gray County--larval infestations averaged 25-100% in 3 corn fields near Ingalls. Larvae, fed on ears and sterile ears, up to 4 in individual ears. (Mock). Thomas County--generally light on corn, but threatening to economic in 3 fields near Rexford; 1 field treated. (Rheinhardt).

CORN ROOTWORMS (Diabrotica spp.) - MONTANA - Yellowstone County--WESTERN CORN ROOTWORM (D. virgifera) adults up to 20 per plant in some corn fields, ate foliage and silks. Plants damaged earlier by larvae, recovering. (Jensen, Bain). SOUTH DAKOTA - Statewide--D. virgifera decreased 90-95% this summer compared with 1976; trace in most corn fields. NORTHERN CORN ROOTWORM (D. longicornis) did not decrease as sharply, still laying eggs in corn fields. A survey of 75 fields showed about 50% would not require soil treatment in 1978; number of fields/with range of adults per 50 plants: 13/0, 21/1-25, 7/26-49, and 35/50 and more. (Walgenbach).

OKLAHOMA - Texas County--D. virgifera adults heavy, cut corn silks in scattered fields. Few fields treated. (Arnold). MISSOURI -North-central area-D. longicornis and D. virgifera adults 15-100+ (averaged 41) per plant in 2 corn fields week ending July 23. Chariton County--adults averaged 13.5 and 12.8 per plant in 2 treated fields. (Munson). ILLINOIS - New D. virgifera county records. Jackson County--collected on corn 3 miles east of Murphysboro by R.W. Frank, July 27, 1977. Crawford Countycollected 8 miles north of Oblong by D. Love, July 21. Both determined by J. Bouseman. (Black). INDIANA - New D. virgifera county records from grain corn collected and determined by R. Meyer and confirmed by D. Leva. Wayne County--near Dalton, July 16, 1977. Fayette County--near Bentonville July 17. (Meyer). La Porte County--D. virgifera adults averaged 1-2 per plant in 4 of 32 fields and 2.6 per plant in 1 field July 20-22. (Anderson). Central District -- adults averaged 1.64 per plant in Howard County and 1.88 in Blackford County in 48 fields surveyed July 26-28. (Meyer).

OHIO - New  $\underline{D}$ .  $\underline{virgifera}$  county records. Wayne County--1 adult on corn near Wooster July 22, 1977. Collected and determined by G. Szatmari-Goodman. Preble County--1 specimen from sorghum north of W. Manchester (U.S. Highway 127). Collected and determined by B.M. Drees. (Drees). OHIO -  $\underline{D}$ .  $\underline{longicornis}$  adults averaged per corn ear (5 samples) by county:  $\underline{Darke}$  2.8 (with 10%  $\underline{D}$ .  $\underline{virgifera}$ ), Miami 3, Montgomery 4, and Preble 2. (Drees).

MARYLAND - Frederick County--Diabrotica longicornis adults infested 50% of 5 acres of postpollination field corn. (Hellman, Pinto). PENNSYLVANIA - Centre County--D. longicornis adults emerged in corn July 27 and 28 at Rock Springs. (Gesell). NEW YORK - First D. longicornis adults of season July 21 on sweet corn in Tompkins County. (Willson).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Counts on sorghum by county: Comanche-40 per late head; Tom Green and Runnels-44 per 50 heads in 1 field in 30% bloom. (Moore et al.).

OKLAHOMA - Averages per 10 heads of blooming sorghum by county: Muskogee--1; Mayes--light. (Arnold).

GRASSHOPPERS (Melanoplus spp.) - MISSOURI - Northeastern area-moderate to heavy in marginal rows of almost all corn. Some heavy populations throughout some fields. Mainly  $\underline{\text{M}}$ . differentialis 5-40 per sq yd. (Munson).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - Osage, Shawnee, and Coffey Counties--second generation nymphs and first generation adults averaged up to 70-120 per plant on 22 to 24-inch sorghum. (Hilbert). Marshall County--second generation nymphs averaged 500 per plant on early bloom sorghum in 1 field, lodging due to poor secondary root development. (Bell).

WESTERN WHEAT APHID (Brachycolus tritici) - NEW MEXICO - New county record. Valencia County-from Agropyron smithii (western wheatgrass) and A. elongatum (tall wheatgrass) at Los Lunas where it destroyed test plots of wheatgrass just before cultivar release. Collected by F. Quinones, May 18, 1977. Determined by M. Stoetzel. (Durkin).

#### SMALL GRAINS

Maturity of small grain cereals July 13-26 still 14-21 days earlier than normal, although scattered fields and others in few local areas that required replanting are near normal. Temperatures and relative humidity continue higher than normal. Precipitation generally adequate but occurred as thunderstorms. Early hot weather resulted in small heads of wheat in central North Dakota but favorable conditions at flowering resulted in high percentage of seed set, compensating for small heads. (Roelfs, Long).

# DISEASES

OAT CROWN RUST (<u>Puccinia</u> coronata) trace on highly susceptible cultivars and wild oats in 1977. Only 1 damaged field in Isanti County, MINNESOTA, during survey of the eastern DAKOTAS and western Minnesota in mid-July. No further increase in crown rust expected due to advanced stage of crop maturity in most fields. Severities trace to 5% in scattered late fields in northern Minnesota and North Dakota, and trace to 25% in northern Douglas County, WISCONSIN, on oats in milk stage. These late fields could suffer light losses. (Roelfs, Long).

NORTH DAKOTA - Traill, Mountrail, Cavalier, Bottineau, and Pembina Counties--oat crown rust trace on oats. (Jons). WISCONSIN - Percent of prevalence/severity on oats by county: Marathon--1/1, Clark--16/1, Manitowoc--40/1, Dodge--1/1, Grant--2/1, Brown--16/1,

Kewaunee--1/1, Sheboygan--10/1, St. Croix--19/1, Dane--1/1, Chippewa--5/1, Pierce--12/1, Barron--9/1, Green--1/1, Winnebago--99/2, Wood--36/4, and Waupaca--4/1; statewide average for oat crown rust 12/1. Present in 29 of 79 fields in 19 counties. (Lovett).

WHEAT LEAF RUST (Puccinia recondita) light throughout upper Midwest on commercial wheat cultivars July 13-26. Moderate on susceptible checks in nurseries. High temperatures have been unfavorable for this rust. (Roelfs, Long). NORTH DAKOTA - Traill, Barnes, Steele, Grand Forks, Walsh, Pembina, Cavalier, Ramsey, Towner, Benson, Pierce, Rolette, Bottineau, Mountrail, McHenry, Ward, Burke, Divide, and Williams Counties--wheat leaf rust trace on wheat. (Jons).

LOOSE SMUT (<u>Ustilago nuda</u>) - MINNESOTA - Percent prevalence in 65 barley fields (5 counts per field) this season by county: Kittson--0.44, Mahnomen--0.01, Marshall--0.31, Norman--0.22, Pennington--0.21, Polk--0.60, Red Lake--0.21, Otter Tail--0.13, Wilkin--0.14, Grant--0.18, Swift--0.14, Chippewa--0.14, and Clay--0. (Sreenivasam).

CORONAFACIENS HALO BLIGHT (Pseudomonas coronafaciens) - WISCONSIN - Percent prevalence/severity by county: Grant 26/1, Dane 1/1, Dunn 6/1, Lafayette 10/1, and Green 2/1; statewide average 2/1. (Lovett).

#### TURF, PASTURES, RANGELAND

# INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Prairie County--severe where some hybrid sorghum pastures treated. (Barnes). ALABAMA - Marengo County--developing larvae in all grass pastures. Southern and central areas--infested many Coastal Bermudagrass fields, control efforts general. Geneva, Pike, and Coffee Counties--larvae 0-60 per sq ft in many fields. (Yates et al.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - St. Clair County--larvae damaged 30 acres of 328-acre Coastal Bermudagrass field, grass newly established. Infestation first observed July 24. Economic numbers developing in northern part of State is unusual. (Pair, Huggins).

#### FORAGE LEGUMES

#### INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - IOWA - Clayton, Grundy, and Hardin Counties--larval damage economic to alfalfa regrowth. Larvae 0.5-1.0 inch long, 1-10 per sq ft on 500+ acres of alfalfa in Grundy County. (J.R. DeWitt). MINNESOTA - Southern area--on alfalfa in most of area. Heavy on swathed alfalfa with much feeding damage to new growth, fed on adjacent soybeans. Larvae 0.5 inch to full grown. Some pupae. Damage to gardens widespread, especially to tomatoes. Reported on potatoes and onions at Hollandale, Freeborn County, and sugar beets in Renville County. (Sreenivasam).

GARDEN WEBWORM (Loxostege rantalis) - OKLAHOMA - Averages per sq ft of alfalfa by county week ending July 22: Major--5; Mayes-light. (Arnold). KANSAS - Infested alfalfa terminals by county: Anderson--80% of 12-inch terminals, treatment applied. Allen, Linn, and Douglas--10-60% of 14-inch to bloom stage terminals. (Hilbert).

GRASSHOPPERS - MISSOURI - Northeastern area--Mainly Melanoplus differentialis 8-61 per sq yd of alfalfa. Dry weather and grasshoppers eliminated third growth in area. (Munson). WISCONSIN - Grasshoppers on alfalfa by area: Central--heavier than normal; west-central--up to 15 per sweep, heavy feeding in some fields; south-central and southwest--lighter but increased, may be due to more noticeable larger nymphs. (Lovett).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OREGON - New county records. Wasco County--on alfalfa in Tygh Valley, June 6, 1977; Klamath County--on yellow sweetclover 1 mile northwest of Stewart-Lennox Hill, June 8; and Lake County--on alfalfa at Adel, June 15. Collected and determined by R.L. Penrose, confirmed by T. Kono. (Penrose).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Lincoln County-occasionally in hay alfalfa at Caliente, Echo Valley, Pahranagat
Valley, and Rosa Valley except for one 10-acre field at Caliente
with 100-400 (averaged 200) per sweep week ending July 23. (Bechtel
et al.). Humboldt County--currently averaged 750+ per sweep on
160 acres of hay alfalfa at Quinn River Crossing with large
amounts of honeydew present. (Martinelli).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - NEVADA - Pershing County--increased on seed alfalfa at Lovelock, 50% of leaves infested in one 36-acre field. (Munk).

#### SOYBEANS

#### DISEASES

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - NEBRASKA - Northeastern area--only disease in most soybean fields. Prevalence 50-90%/severity 1-10% in all fields examined. (Poe). ILLINOIS - Douglas, Coles, Cumberland, Piatt, and Shelby Counties--prevalence 12-25% in soybean fields surveyed July 5-15. (Jordan, Shurtleff).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - ILLINOIS - Jasper, Richland, Pope, Pulaski, Jackson, Saline, Hamilton, Washington, and Marion Counties--infected 5-15% of soybeans in commercial fields surveyed July 5-15. (Jordan, Shurtleff).

SOYBEAN BROWN SPOT (Septoria glycines) - ILLINOIS - Massac, Washington, and Shelby Counties--infected 10-25% of commercial soybeans surveyed. (Jordan, Shurtleff).

PELLICULARIA ROOT AND STEM ROT (Pellicularia filamentosa) - ILLINOIS - Douglas, Coles, Cumberland, Jasper, Richland, Pulaski, Jackson, and Washington Counties--infected 8-12% of commercial soybeans. (Jordan, Shurtleff).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - KANSAS - First of season. Atchison and Leavenworth Counties--prevalence trace to 80% in several soybean fields. (Sim). ILLINOIS - Saline County--prevalence 5% in 1 commercial soybean field. (Jordan, Shurtleff).

SOYBEAN MOSAIC VIRUS - NEBRASKA - Dixon County--observed in border rows of 1 soybean field. (Poe). ILLINOIS - Jackson, Saline, Washington, Marion, Effingham, and Piatt Counties-infected 2-20% of commercial soybeans. (Jordan, Shurtleff).

# INSECTS

BEET ARMYWORM (Spodoptera exigua) - NORTH CAROLINA - Coastal Plain--extensive damage continued on soybeans up to 2 ft tall in Craven, Lenoir, Tyrrell, Wayne, and Robeson Counties. Defoliation ranged from 20% in 40-acre field to 10% in 5 acres of 8-inch beans in Robeson County. (Simpson et al.).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Marengo County-heavy larval damage to 800-acre soybean field at Faunsdale in spite of second control application. (Yates).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Counts on soybeans week ending July 22 by county: Nowata--moderate to heavy; Muskogee and Le Flore--averaged 1 or less per 3 row ft in fields. Muskogee, Sequoyah, Haskell, and Le Flore Counties--currently increased slightly in soybeans, larvae 1-2 per 3 row ft in most fields. Mayes and Craig Counties--light to moderate. (Arnold). ARKANSAS - Larvae per 3 row ft of soybeans by county: Jackson--2.6, Lee--1.3, and Desha--1.2. (Dumas). MISSISSIPPI - Statewide-larvae on soybeans. Noxubee County--heaviest in bloom stage soybeans, 2 per row ft, defoliation light. (Anderson).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Barbour and other southeastern counties--summer rains and wind past 3-10 days lodged previously damaged 10-50% of 12 to 30-inch plants in several thousand acres of soybeans; no possibility of plant recovery. Stands greatly reduced. (Walton et al.). SOUTH CAROLINA - Lexington County--heavy on 25 acres of soybeans, damaged about 70%. (Jones).

GARDEN WEBWORM (Loxostege rantalis) - MISSOURI - Central, north-central, and northwestern areas-heavy infestations on double crop soybeans, heaviest populations in weedy fields where germination poor. (Munson).

GRASSHOPPERS - MISSOURI - Far northeastern area--Melanoplus differentialis up to 65 per sq yd, damaged soybeans, many small fields infested throughout and nearly defoliated. (Munson).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - Southeastern area--damage to some soybean fields resulted in lodged plants after strong winds passed through area. (Wall). Adults and nymphs 0.1 per 3 row ft in Desha County. (Dumas). MISSISSIPPI - Webster, Montgomery, Attala, and Madison Counties--0-8 per 25 sweeps of bloom stage soybeans, girdling noted; non-economic. (Anderson).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSOURI - Northeastern area-moderate to heavy, 300+ per leaf on soybeans in several counties, week ending July 22. Currently, infestations in all soybean fields in far northeastern counties. Infested areas range from very small spots to entire fields. Soybeans killed in spots in some fields. Heavy infestations stunted plants in many fields. Ranged 10-400+ mites per leaf in infested fields. (Munson). IOWA - Henry, Lee, Davis, and Jackson Counties-infested soybeans at pod-fill, brown leaves in rows along field margins. Boone County--noneconomic, 5-15 per leaflet. (J.R. DeWitt). ILLINOIS - Western district--fewer than 10 per leaflet in many soybean fields; may increase rapidly. Some recent spraying in Hancock County. (Black).

#### PEANUTS

# INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Barbour County-larvae of mostly fall armyworm and CORN EARWORM (Heliothis zea) with BEET ARMYWORM (Spodoptera exigua), GRANULATE CUTWORM (Feltia subterranea), VARIEGATED CUTWORM (Peridroma saucia), and LESSER CORNSTALK BORER (Elasmopalpus lignosellus) damaged almost all peanut fields in the 20,000+ acres. Adult flights and egg laying heavy July 28. Larvae 4-24 per ft of row. Similar conditions across the 9 counties on the 200,000 acres. Geneva County--larvae per ft of row averaged 10 fall armyworm, 5 corn earworm, and 1 beet armyworm. (Walton et al.).

FLORIDA - Panhandle area--worst population of mainly fall army-worm with BEET ARMYWORM (S. exigua), SOUTHERN ARMYWORM (S. eridania), and YELLOWSTRIPED ARMYWORM (S. ornithogalli) reported on peanuts. Damage heavy. Jackson County--the above species along with CORN EARWORM (Heliothis zea) and GRANULATE CUTWORM (Feltia subterranea) averaged about 18 per row ft on July 18 and 25 on untreated plots, and about 5 per row ft on treated plots July 9 and 18 near Greensboro. Infestations on these treated plots increased to 35 per row ft 14 days after treatment. Treatments applied at least once every 5-7 days due to registered chemicals not providing residual control. Populations too heavy to keep larvae at acceptable levels without accelerated spray schedule in some fields. (Tappan).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - TEXAS - Comanche County--20-30% damage to isolated peanut fields. (Moore). OKLAHOMA - Marshall County--averaged 25% in peanuts week ending July 22. (Arnold). FLORIDA - Jackson County--still problem on peanuts, some fields need retreatments. Pegs and pods expected to be infested. (Linker).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Infested peanut terminals by county week ending July 22: Marshall--90% (1-3 larvae per terminal); Haskell--10%. (Arnold).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - FLORIDA - Western Alachua and northeastern Levy Counties-damaged peanuts in 80 of 2,000 acres surveyed; complete defoliation in some spots. (Baker). Jackson County-infested 70-80% of peanut fields east of county. Infestations spotty in some fields and more general in others. (Linker).

#### INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county July 15-25: Cameron--0-28 adults and 0-61 punctured squares per 100 plants; Hidalgo--0-11 punctured squares per 100 plants; Willacy--0-31 punctured squares per 100 plants; Hill and Johnson--punctured squares increased, ranged 10-75%, 15% in most fields; Ellis and Navarro--punctured squares increased, 0-39%; Collin and Hunt--0-8% punctured squares, 20-30% damaged squares and bolls; Rolling Plains -- less than 3% damaged squares in most fields: Jones and Fisher--damaged less than 3% of squares in 90% of fields; 7-24% in 10% of fields, 8-29% in few fields; Kent, Motley, Stonewall, and Wichita--8-29% damaged squares in few fields: Tom Green and Runnels -- 11-12% damaged squares in untreated fields, 0-4 per trap per day; Rolling Plains area--infested fields 28% in control zone, 90% outside; Motley--0-11% punctured squares in control zone; Dickens--0-3% punctured squares in control zone; Kent--0-7% punctured squares in control zone, 0-8% outside: Stonewall--1-29% punctured squares outside control zone: Howard--1-41% damaged squares. (Cocke et al.).

OKLAHOMA - Jackson, Harmon, Tillman, Greer, and Kiowa Counties—boll weevil punctured squares very light in most cotton fields but at or near economic threshold of 25% in few scattered fields week ending July 22. Adults in pheromone traps by county: Greer—73 in 14 traps; Tillman—41 in 8; Jackson, Harmon, and Kiowa—0 in 77. (Arnold). ARKANSAS - Northeastern and southeastern areas—increased on cotton, some fields treated. (Kimbrough, Wall). MISSISSIPPI - Continued to increase in "hill section." Punctured squares by county: Grenada—1% on 7,000 acres of cotton; Prentiss—1% on 650; Tippah—0.5% on 2,000; Chickasaw—3% on 100; Yalobusha—0.03% on 5,000; Alcorn—1.5% on 325; Lee—2% on 800; Adams—4% on 750; Attala—4% on 4,000; Franklin—14% on 200; Madison—2% on 2,500; Lowndes—2% on 500; and Leake—16% on 1,070. (Anderson).

ALABAMA - Statewide--second boll weevil emergence underway. Economic square damage 5-50% in southern and central areas and 0-5% in northern area. Control efforts general in 50+% of fields in southern and central areas. (McQueen). GEORGIA - Boll weevil adults trapped by county week ending July 23: Dooly--2; Crisp--1; and Turner and Tift--0. Statewide--indicated very light pressure. (Jones et al.). SOUTH CAROLINA - Statewide--still light on cotton in almost all counties except Cherokee County, several infestations up to 8%. (Douglass).

BOLLWORMS (Heliothis spp.) - TEXAS - BOLLWORM (H. zea) and TOBACCO BUDWORM (H. virescens) counts on cotton by county July 15-27: Cameron--0-68 eggs, 0-35 larvae, 0-37 damaged squares per 100 plants at Lozano, La Feria, and Brownsville; Hidalgo--0-21 eggs, 0-12 larvae, 0-11 damaged squares per 100 plants at Alamo and Weslaco; Willacy--0-43 eggs, 0-25 larvae, 0-37 damaged squares per 100 plants east of Lyford; Hill and Johnson--few larvae in older fields, 10-60 eggs per 100 terminals in growing fields; Ellis and Navarro--less than 20% eggs common; Collin and Hunt--decreased egg laying, 0-14 eggs, 0-7 larvae per 100 plants; Fisher and Jones--2-11% damaged squares, 5-17 eggs per 100 terminals; Wichita--10-20% damaged squares; Castro--40-60 per

trap per night; St. Lawrence-- 4 eggs and 3 larvae per 100 terminals, 13% damaged squares; Martin--0-10 eggs, mean of less than 1 egg per 100 terminals, 0-28% damaged squares; Howard--0-2 eggs per 100 terminals, 0-8% damaged squares, mean for eggs, larvae, and damaged squares less than 1%; Pecos and Reeves--0-67 eggs and up to 128 damaged squares per 100 terminals; H. zea 25 and H. virescens 3.3 per trap per night, 0-10 unspecified small larvae per 100 terminals and 0-12% damaged squares; El Paso--2-25 eggs per 100 terminals, 0-13% (less than 8% in most fields) damaged squares. (Lee et al.).

OKLAHOMA - H. zea averages per 100 cotton terminals by county week ending July 22: Coal--lst to 3rd instar larvae 30 and eggs 50 in 3 fields; Jackson, Harmon, Tillman, Greer, and Kiowa--larvae 3 in most fields but 8-13 in few fields, eggs 4-6 in most fields but up to 60 in few fields, 2-5% damaged squares in Harmon County; Caddo and eastern Washita Counties--currently, H. zea damaged 10-15% of cotton squares in some isolated fields, adults common. (Arnold). ARKANSAS - Southeastern area--H. zea and H. virescens problems serious, unaffected by repeated treatments in about 1-2% of fields. (Wall). Northeastern area--H. zea problems spotty with fields at treatment levels mostly along St. Francis River. (Kimbrough).

MISSISSIPPI - Statewide--bollworm eggs increased on cotton with increase of controls. Majority of cotton acreage treated at least once to date. Larvae in Delta counties: Carroll--light on 1,500 acres with 16% eggs in 2 fields; Quitman--12%, up to 45% on 2,000 with average of 6% eggs; and Sharkey--6%, ranged 0-50%, on 1,000. Larvae in northern counties: Itawamba--3% on 2,000 acres; Lafayette--2% on 2,000; Marshall--0% on 6,000 with 1% eggs; Pontotoc--2% on 100; Prentiss--2% on 650; Tippah--1% on 2,000; Chickasaw--10% on 100; Yalobusha--0.03% on 5,000; Alcorn--2% on 325; and Lee--2% on 800. Larvae in central and southern counties: Adams--4% on 750; Attala--2% on 4,000; Franklin--2% on 200; Holmes--4% on 400; Madison--10% on 2,500; Lowndes--10% on 500; Leake--4% on 1,070; and Webster--1%, up to 8%, on 450. (Anderson).

ALABAMA - Southern and central areas--after heaviest H. zea (occasional H. virescens) adult flight ever noted 10-12 days ago, larvae widespread and damaging in 30-60% of all cotton fields. Control general and not effective in several thousand acres in Lee, Barbour, Russell, Macon, and probably other counties; one-half to two-thirds grown larvae 1-2 per stalk in squares and bolls. Difficulty in identification with unusual adult flight of FALL ARMYWORM (Spodoptera frugiperda) and their larvae occurring at same time in cotton fields. (McQueen). GEORGIA - Southern area--Heliothis spp. adult flight continued but decreased; northern area--flight peaked. Adults on "sugar line" on July 18 and July 21, respectively, 18 and 38 H. virescens, and 33 and 92 H. zea. H. virescens adults trapped by county: Dooly--4, Crisp--6, Turner--3, and Tift--6. Eggs ranged from zero on very dry cotton to 100+ on fruiting cotton. (Brannen et al.).

SOUTH CAROLINA - Statewide--H. zea flights heavy past 14 days. Light trap counts in Dillon  $\overline{\text{County}}$  still heavy as of July 25; adults 325-900 per night in each of 2 traps. Adults very heavy in cotton fields with resultant increases of eggs on plants; eggs

per 100 plants: 500-1,200 in lower Dillon County and in Marion County, 40-140 in test plots in Greenwood County on July 21 but decreased to 20-60 on July 26. By July 27, bollworm adults had decreased in fields in Chester, York, Greenwood, Marlboro, and Lee Counties, and in light traps in the first 2 counties. Heavy larval infestations in some fields by county: Dillon-40%, Chester-90% in 15-acre field of late-planted cotton, York-15-50%. (Douglass et al.). NORTH CAROLINA - Statewide-most spray programs initiated for H. zea. Franklin, Edgecombe, and Harnett Counties--very heavy egg Taying underway. (Hunt).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Southern and central areas--adult flights and egg laying very heavy past 10 days along with BOLLWORM (Heliothis zea) adults in all cotton fields. Larvae in 1st to 3rd instars on square bracts in new and old blooms with occasional older instars in base of cotton bolls. Damage to bolls may equal or surpass similar limited infestation recorded in Lee and Autauga Counties in 1975. Egg laying heavy in cotton, peanuts, grass, corn, and all other host plants. (McQueen).

BEET ARMYWORM (Spodoptera exigua) - SOUTH CAROLINA - Pee Dee area---up to 40 larvae per 100 cotton plants, heavy. (Douglass et al.).

#### TOBACCO

# INSECTS

BEET ARMYWORM (Spodoptera exigua) - NORTH CAROLINA - Wake (6 acres) and Sampson (10 acres) Counties--larvae damaged up to middle of tobacco stalks; limited aerial control applied in Sampson County. (Reagan).

#### MISCELLANEOUS FIELD CROPS

#### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - KANSAS - Counts on sunflowers by county: Southeastern area-commonly heavy (Kilgore); Shawnee and Johnson-larvae in 100% of postbloom heads (Hilbert); Riley, Dickinson, and Ellis--100% of early bloom to mature heads (Bell); Morton--larvae averaged 18 per head in full bloom (Mock); Harvey--larvae heavy in early bloom heads in 1 field (Gates).

A BLISTER BEETLE (Zonitis bilineata) - OKLAHOMA - New county record. Cimarron County--collected on Helianthus sp. (sunflower) at Felt by J.W. Johnson, July 27, 1977. Determined by D.C. Arnold. (Arnold).

# POTATOES, TOMATOES, PEPPERS

#### INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - WISCONSIN - Central Sands area-mostly this species (up to 12 per sq ft in spots) with other cutworms persist in many potato fields. Majority of fields treated; populations heaviest along margins. Spring Green areadecreased due to treatment and full growth of cutworms. Defoliation in both areas. (Lovett). OHIO - Miami County--tomatoes severely

damaged by variegated cutworm in Bunker Community Garden Project. Similar infestations reported in Lawrence, Ross, Jefferson, Sandusky, and Hancock Counties, reported as worst ever noted in Sandusky County. (Maddy).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - UTAH - Cache County--heavy and injurious on potatoes in Benson area (Roberts, Burtenshaw); population and damage generally above normal in northern area of State this season (Knowlton).

#### BEANS AND PEAS

#### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - Central Sands area--small larvae light on snap beans in Central Sands; damage expected to increase. (Lovett).

#### **COLE CROPS**

#### INSECTS

CABBAGE LOOPER (Trichoplusia ni) - NEW YORK - Ontario County-several early and late instar Tarvae in direct-seeded cabbage fields July 14, earlier than normal activity for upstate. (Muka).

YELLOWMARGINED LEAF BEETLE (Microtheca ochroloma) - FLORIDA - New county record. Brevard County--larvae and adults generally infested leaves of Brassica rapa (turnip) on farm at Titusville. Collected by R. Brown, May 24, 1977. Determined by R.E. Woodruff. (Woodruff).

#### HAWAII PEST REPORT

General Vegetables - BROAD MITE (Polyphagotarsonemus latus) heavy on eggplant and chili pepper (backyard plantings) at Pearl City, Oahu. (L. Nakahara).

Fruits and Nuts - Larvae and eggs of a NYMPHALID BUTTERFLY (Agraulis vanillae) recently collected from Passiflora foetida at Waimanalo, Oahu. Adults also observed frequenting P. foetida vines at Pearl City. Both locations farthest north and west of Manoa where it was discovered on new hosts in January. Surveys in commercial lilikoi fields at Kahuku late June were negative. (Murai et al.).

Ornamentals - A WHITEFLY (Orchamoplatus mammaeferus) light on croton at Pearl City, Oahu, farthest locality west of discovery at Palolo Valley in June 1976. (L. Nakahara).

Sugarcane - ARMYWORM (Pseudaletia unipuncta) light to moderate (1-2 larvae per sq ft) on 70 acres of ratooned sugarcane in early July at Ookala, Hawaii Island. Defoliated about 50-75% of young leaves. All larvae held for emergence parasitized 75-80% by Meteorus laphygmae (a braconid wasp) and 20-25% by Eucelatoria sp. (a tachinid fly). No armyworm larvae recovered from infestation site 2 weeks later. (Matayoshi).

#### **DECIDUOUS FRUITS AND NUTS**

#### INSECTS

CODLING MOTH (Laspeyresia pomonella) - OKLAHOMA - Wagoner County-5 adults in 2 pheromone traps in apple orchard week ending July 22. (Arnold).

ORIENTAL FRUIT MOTH (<u>Grapholitha molesta</u>) - OKLAHOMA - Wagoner County--4 adults in 2 pheromone traps in peach orchard week ending July 22. (Arnold).

APPLE MAGGOT (Rhagoletis pomonella) - MINNESOTA - Trap counts by county July 21-27: Scott--2, west Hennepin--41, Ramsey--45, and Washington--8. (Sreenivasam).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - Yakima, Spokane, and Asotin Counties-available chemicals not reducing populations on pears below economic levels. (Fisher).

EUROPEAN RED MITE (Panonychus ulmi) - MISSOURI - Adults per leaf on apples by area week ending  $\overline{July}$  23: Central--0-2.5 (averaged 2.0) and Hannibal--0-0.5 (averaged 0.5). (Munson). Central area-0-3.5 (averaged 0.7) per leaf on delicious apple trees. (Enns).

TWOSPOTTED SPIDER MITE (<u>Tetranychus urticae</u>) - MISSOURI - Adults per apple leaf by area week ending July 23: Central--8.8-48.8 (averaged 29.1) and Hannibal 1.0-2.0 (averaged 1.5). (Munson). Current counts: Central area--4.0-19.0 (averaged 2.5 and 4.3 in 2 orchards) per leaf on delicious apple trees. (Enns).

PECAN WEEVIL (<u>Curculio caryae</u>) - OKLAHOMA - Love County--first adult of season emerged in 1 pecan orchard week ending July 22. (Arnold).

WALNUT HUSK FLY (Rhagoletis completa) - CALIFORNIA - San Joaquin County--adults very heavy, unusual, in localized area near Tracy and Stockton. Treatment at Tracy applied. (Brown).

#### **CITRUS**

#### INSECTS

A TORTRICID MOTH (<u>Platynota stultana</u>) - CALIFORNIA - Fresno County--young larvae infested about 50-60% of navel orange fruit on 20 acres at Orange Cove, larvae do not normally enter fruit through navel end. (Loughner).

# SMALL FRUITS

#### INSECTS

WESTERN GRAPELEAF SKELETONIZER (<u>Harrisina brillians</u>) - CALIFORNIA - Tulare County--light to heavy damage in one 18-acre grape vineyard at Visalia, damage heavy in outside rows. Treatment required at least along margins. One acre in another 160-acre vineyard already treated. Over 800 <u>Apanteles harrisinae</u> (a braconid wasp) released at Visalia for biocontrol. (<u>McIntire</u>).

GRAPE BERRY MOTH (Paralobesia viteana) - PENNSYLVANIA - Erie County--second flight unusually early as first flight peaked about 7 days later and resulted in flight activity from early June to present time. Larval infestations at 6 of 17 grape locations, less than 1.5% of clusters damaged. Only serious infestations in 2 or 3 rows bordering wooded areas at several locations. (Jubb).

#### FOREST AND SHADE TREES

#### INSECTS

TWOLINED CHESTNUT BORER (<u>Agrilus</u> <u>bilineatus</u>) - WISCONSIN - Dane and Rock Counties--widespread mortality of black and red oaks under severe drought stress following infestations. (Lovett).

A CHRYSOMELID BEETLE (<u>Plagiodera arizonae</u>) - NEVADA - Lincoln County--up to 15 larvae of various instars per willow leaf at Caliente and Kershaw-Ryan State Park. Damage light to heavy week ending July 23. (Bechtel et al.).

FALL WEBWORM (<u>Hyphantria cunea</u>) - NEW HAMPSHIRE - Statewide-infestations much reduced from past 3 years. Infestations widely scattered in previously heavily infested areas of Strafford County, at Canterbury, Merrimack County, and Stoddard and Marlow, Cheshire County. (J.F. Burger).

MIMOSA WEBWORM (<u>Homadaula anisocentra</u>) - PENNSYLVANIA - New county record. Northumberland County-larvae and webbing light on <u>Gleditsia triacanthos</u> (honey locust) at Northumberland, by S. Hager, June 23, 1977. Determined by K. Valley. (Hager).

WILLOW SHOOT SAWFLY (Janus abbreviatus) - MISSISSIPPI - New State record: Washington County--light to heavy in willow and cottonwood nurseries at Stoneville, June 6, 1977. Collected and determined by J.D. Solomon. Confirmed by D.R. Smith. (Anderson).

#### MAN AND ANIMALS

#### INSECTS

HORN FLY (<u>Haematobia</u> <u>irritans</u>) - TEXAS - Tom Green County--300 per side on cattle, 100 per side on sheep July 21. (Wilson).

MISSISSIPPI - Central area--light, 25-200 per head in cattle.

(Anderson). WEST VIRGINIA - Hardy County--adults about 50-500 per animal on 9 mature beef cows at Moorefield. (Butler). NEW

HAMPSHIRE - Sullivan County--adults averaged 100-150 per head of beef cattle at Acworth July 22. (J.F. Burger).

FACE FLY ( $\underline{\text{Musca}}$  autumnalis) - MISSISSIPPI - Central area--light, 0-4 per face on cattle. ( $\underline{\text{Anderson}}$ ). NEW HAMPSHIRE - Statewide--adults increased rapidly in mid-July. Averaged 40-75 per head of beef cattle at Acworth, Sullivan County, July 22. (J.F. Burger).

#### MISCELLANEOUS PLANTS

#### INSECTS

A CHRYSOMELID BEETLE (Cassida rubiginosa) - WEST VIRGINIA - New county records. Pleasants County--adults and larvae collected from Cirsium pumilum (fragrant thistle) at St. Marys, May 25, 1977. Fed on about 10% of thistle foliage. Collected and determined by J.D. Hacker. Jefferson County--adults and larvae on Carduus nutans (musk bristlethistle) and C. crispus (curly bristlethistle) at Summit Point, May 18. Collected by C.C. Coffman. Determined by J.D. Hacker. Hampshire County--collected from C. nutans at Romney, May 19. Collected by C.C. Coffman and J.D. Hacker. Determined by J.D. Hacker. Fed extensively on rosettes and second year plants. (Hacker).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

# INSECTS

A EULOPHID WASP (Tetrastichus julis) - Recoveries of 20+% parasitism of Oulema melanopus (cereal leaf beetle) larvae in individual oat fields (unless otherwise stated) by State and county. OHIO - Licking--25% in Eden Township May 16; Wood--75%, 100%, and 100% in 3 Liberty Township fields, 50%, 50%, and 100% in 3 Milton Township fields, 100% in Plain Township May 31, and 100% in Weston and Grand Rapids Townships June 7; Fayette--33% in Union Township June 3 and 100% in Paint Township June 6. NEW YORK - Ontario--100% in Seneca Township June 7; Otsego--100% in Laurens Township June 3. MASSACHUSETTS - Berkshire--100% in North Egermont Township May 30 and 30% in Alford Township June 9. (T.L. Burger).

AN ICHNEUMONID WASP (<u>Diaparsis</u> sp.) - OHIO - New county record. Licking County-parasitized 33% of <u>Oulema melanopus</u> (cereal leaf beetle) larvae in 1 oat field in Eden Township June 3, 1977. Collected by C. Arnold. Determined by V. Montgomery. MASSACHUSETTS - New State record. Berkshire County-parasitized 25% of <u>Oulema melanopus</u> (cereal leaf beetle) larvae in 1 oat field in North Egermont Township June 22, 1977. Collected by R. Anderson. Determined by V. Montgomery. (T.L. Burger).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

OAT STEM RUST (Puccinia graminis var. avenae) arrived in upper Midwest in early June and by mid-July, seriously affected oats in northeastern and east-central SOUTH DAKOTA and adjoining MINNESOTA counties with a few scattered fields in central Minnesota. Severities at maturity in this area 20-30%, probably resulted in a 5% loss. A few scattered fields (about 10%) still in milk stage at this time. Terminal severities will be 40-100% with losses 20+%. By July 22, the rust area had expanded northward through the 5 southeastern counties of NORTH DAKOTA (Jons) and adjacent counties of Minnesota. About 10% of oats in this area mature and relatively unaffected, and 65% moderately rusted at 10-30% severity with trace to 5% losses. Remaining late fields

will be, and are, severely rusted. In northeastern North Dakota, oat stem rust severities increased from trace to nearly 10% during past week and perhaps 50-60% of these oat fields will lose trace to 5% of crop. On July 26, severities east of North Dakota State Highway 1 ranged 10-40% all the way to the Canadian Border. Rate of increase of this rust throughout this epidemic area near maximum rate of development. Probably race 31 involved in this epidemic according to preliminary data from the race survey. Most commercial cultivars have negligible resistance to this race. Elsewhere in North Central States, oat stem rust severities trace to 5%. Following races identified from collections received before July 25. (Roelfs, Long).

	No. of	Number	of Is	olates o	of Oat	Stem Rust	Races
Area	Collections	2	8	31	61	77	87
AL	3			9			
CA	1		3				
FL	2	2		3			
IA	12			33			
KS	7			20			
LA	4			9	3		
MN	4			10			
NE	9			22	1		
OK	3			6	_		
SC	3	7		2			
TX	(			_			
South	76	4		200	15	2	1
Central	44	9		101	14	1	-
North	15	4		37	2	î	
		~		_ ,	2.00	-	

NORTH DAKOTA - Percent of oat stem rust prevalence/severity on oats by county: Traill, Barnes, Griggs, Steele, Grand Forks, and Walsh--100/40, Pembina--100/30, Cavalier--109/15, Ramsey--100/15, Towner--109/10, Benson--100/5, and Burke, Divide, and Williams--10/1. (Jons). MINNESOTA - Northwestern area--in all oat fields surveyed including Red River Valley area. Oat prevalence 100%/severity 30-40% in oat fields at late milk through early dough stage in Kittson, Marshall, and Roseau Counties. Rust pustules common on glumes as well as panicle and stem. (Stromberg). WISCONSIN - Percent prevalence/severity on oats by county: Marathon--1/1, Clark--1/1, Manitowoc--2/1, Fond du Lac--5/1, Dodge--13/1, Brown--1/1, Kewaunee--1/1, Dane--3/1, Door--10/1, Lafayette--1/1, and Winnebago--3/1; statewide average 2/1. Percent in 21 of 79 fields, more prevalent than in 1976; severity light. (Lovett).

WHEAT STEM RUST (<u>Puccinia graminis</u> var. <u>tritici</u>) pustules scattered through upper Midwest as far west as eastern MONTANA July 13-26. Principal varieties Waldron, Era, and Olaf highly resistant, but occasional offtype plants rusted. In heavily inoculated nurseries, high temperatures resulted in moderately susceptible host responses by commercial cultivars Butte, Era, Kitt, and Waldron. No major shift thus far in races identified in physiological race survey. Following races identified from collections received before July 25.

	No. of Collec-	Numk	per o	of Is	solat	tes (	of Wh	neat	Ster 1		st Ra	aces 17	7
Area	tions	TNM	TLM	TDM	QCB	QFB	QSH	RKQ	RTQ	RCR	RHM	HNL	HDL
AL	1				3								
AR	2						3				3		
CO	2	6											
FL	5	8	1		6								
GA	6	11	2		3	2							
IL	3 1	6							3				
IA	1	3											
KS	34	60		2		1	25	1	2	2			
LA	13				24	2	3			7		3	
MN	6	9				5	3						
MS	1				3								
NE	19	30	1	1			21		2	2			
ОН	1	3	_					_					
OK	31	54	1	4	_	8	14	5	5 1.			4	
SC	1				1								2
SD	1						3						
TX	12	7			1	2	0	4	1				
So. Cent.	7	- 1			12	3	9	4	Т			3	
No.		2			3	3	3					3	
WI	2	6			J		3						
MEXICO	3 2 3	0	2		3			1					

Barley generally mature with little wheat stem rust July 13-26. Laker remains rust free but, Beacon frequently with few moderate to large pustules. Wild barley, <u>Hordeum jubatum</u>, had less rust than in recent years. (Roelfs, Long).

DUTCH ELM DISEASE (<u>Ceratocystis</u> <u>ulmi</u>) - CALIFORNIA - Several new sites discovered with diseased trees. Solano County--infected 2 Siberian elms in second area at Vallejo, 2 miles from previous site. At San Rafael, Marin County, and at Napa, Napa County--other new sites include large leaf elms. Sonoma County--old sites with confirmed infected trees at Kenwood, El Verano, and Sonoma. Diseased trees being removed. (Arciero). WISCONSIN - Statewide--elms dying in greater numbers in 1977 than in any previous year. Disease developed 30 days earlier than usual and large number of carryover infections from 1976. (Lovett).

### INSECTS

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - VIRGINIA - New county record. Grayson County--adults on oats at Independence. Collected by J.C. Callahan, C.L. Stuart, and B.M. Stuart, June 21, 1977. Determined by H.L. Smith. (Allen).

GRASS BUGS (<u>Labops</u> spp.) - NEVADA - New <u>L</u>. <u>hirtus</u> county record. Elko County--1 female collected from native hay meadow at Upper Ruby Valley by C. Anderson, July 21, 1977. Determined by R.C. Bechtel. (Bechtel). UTAH - Sanpete County--<u>Labops</u> spp. still 30 per sweep of range and turf in higher areas of Ephraim Canyon. Iron County--same in some areas on planted grass ranges. (Haws, Knowlton).

GRASSHOPPERS - WASHINGTON - Stevens County--Melanoplus spp. almost 30-40 per sq yd of turf, pastures, and rangeland near Cedonia and Fruitland. (Madson). NEVADA - Humboldt County--mostly Melanoplus sanguinipes with Aulocara elliotti and Cratypedes neglectus 4-15 (averaged 7-8) per sq yd on 3,000 acres of range-land from Rock Creek to 1 mile south of Orovada on west slope of Santa Rosa Range week ending July 22. Development 10% adults. (Rowe et al.). OKLAHOMA - Counts by county week ending July 22: Nowata--light to moderate in fescue pastures and gardens; Hughes--24 per sq yd of sudangrass; Jackson, Harmon, Tillman, Greer, and Kiowa--heavy on alfalfa and margins of cotton; Harmon--heavy in pastures; Murray--moderate to heavy on alfalfa, soybeans, and gardens; Bryan--heavy in pastures and gardens; Latimer--moderate in pastures; and Atoka--heavy, 6-12 per sq yd in gardens and pastures. (Arnold). KANSAS - Atchison County--mainly Melanoplus differentialis severely damaged some borders of corn and soybeans about 4 miles north of Atchison on State Highway 7. (Sim).

Averaged 20 per sq yd along grassy border of sorghum field at junction of State Highway 116 and U.S. Highway 159. (Bell). Seward, Haskell, and Kearney Counties--undetermined species heavy. (Mock).

GYPSY MOTH (Lymantria dispar) - NEW HAMPSHIRE - Merrimack County-adult emergence completed at severely defoliated 200-acre area in Canterbury. Many females still laying eggs on trees July 19. Egg masses scattered on most trees, but 160 masses on 1 pine tree; 100+ females still laying eggs on same tree. Adults of Compsilura concinnata (a tachinid fly) very abundant at this site on July 19. Chalcidoid parasites also were observed ovipositing on egg masses. Parasite emergence is now completed in area. Of 411 pupae collected, 271 gypsy moths emerged (68%) as well as 4 adults of  $\frac{C}{1}$ .  $\frac{C}{A}$  concinnata, 8 adults of  $\frac{C}{A}$  Brachymeria intermedia (a chalcid wasp), adult of an unidentified ichneumonid wasp, and 68 tachinid puparia for total parasite emergence of about 20%. Total of 59 pupae did not emerge for unknown reasons. Diseased pupae about 20%. About 97% of all unemerged C. concinnata puparia collected July 19 parasitized by a hymenopterous hyperparasite and at least 2 of these hyperparasites parasitized by a chalcidoid hyper-hyperparasite. All unemerged parasites held for emergence next spring. (Keating, J.F. Burger). MAINE - Penobscot County--moderately heavy on several hundred acres of trees near Veazie. All larvae full grown or in pupation. (Gall).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - San Joaquin Valley--117,051,069 sterile adults shipped for release up to July 30, about 50 million for similar period in 1976. About 35,000 traps installed in all cotton counties. Nine native adults trapped up to July 29. (Petty).

SCREWWORM (Cochliomyia hominivorax) - Total of 5 cases reported from continental United States July 10-16 as follows: New Mexico 2, Arizona 3. (Meadows). Total of 166 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,337 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 127,629,000 as follows: Texas 88,064,800, New Mexico 10,197,000, Arizona 28,791,200, California 576,000. Total of 150,812,000 sterile flies released within Barrier of Mexico. (Williams, Smith).

ORIENTAL FRUIT FLY (<u>Dacus dorsalis</u>) - CALIFORNIA - First adults trapped since eradication <u>earlier</u> this year. Orange County--1 male trapped at Cypress by G. Jackson, July 27, 1977. Second male at another address in same town, July 28. Los Angeles County--2 males trapped July 28 and 1 male August 1 at Burbank by E. Kondo. All determined by M. Wasbauer. (Cunningham).

### DETECTION

NEW STATE RECORDS

### INSECTS

AN ICHNEUMONID WASP (<u>Diaparsis</u> sp.) - MASSACHUSETTS - Berkshire County. (p. 597).

WILLOW SHOOT SAWFLY (<u>Janus</u> <u>abbreviatus</u>) - MISSISSIPPI - Washington County. (p. 596).

NEW COUNTY RECORDS

### INSECTS

A BLISTER BEETLE (Zonitis bilineata) - OKLAHOMA - Cimarron. (p. 593).

BLUE ALFALFA APHID (<u>Acyrthosiphon</u> <u>kondoi</u>) - OREGON - Wasco, Klamath, Lake. (p. 588).

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - VIRGINIA - Grayson. (p. 599).

A CHRYSOMELID BEETLE (<u>Cassida rubiginosa</u>) - WEST VIRGINIA - Pleasants, Jefferson, <u>Hampshire</u>. (p. 597).

A FRUIT FLY (<u>Paraterellia ypsilon</u>) - CALIFORNIA - San Joaquin County--one adult trapped in Frick trap at Manteca, by D. Giesing, July 15, 1977. Determined by K. Brown. (Brown).

AN ICHNEUMONID WASP (Diaparsis sp.) OHIO - Licking. (p. 597).

A GRASS BUG (Labops hirtus) - NEVADA - Elko. (p. 599).

MIMOSA WEBWORM (Homadaula anisocentra) - PENNSYLVANIA - Northumberland. (p. 596).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - OKLAHOMA - Texas. (p. 585).

WESTERN CORN ROOTWORM (<u>Diabrotica virgifera</u>) - ILLINOIS - Jackson, Crawford; INDIANA - Wayne, Fayette; OHIO - Wayne, Preble. (p. 585).

WESTERN WHEAT APHID (Brachycolus tritici) - NEW MEXICO - Valencia. (p. 586).

YELLOWMARGINED LEAF BEETLE (<u>Microtheca ochroloma</u>) - FLORIDA - Brevard. (p. 594).

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TRAP COLLECTIONS	7/19	ORIDA Gainesville 7/21-27	INDIANA (Counties) Randolph 7/15-21 Tippecanoe 7/15-21	NSAS Garden City 7/25-27 Pratt 7/22-27	MICHIGAN (Counties) Berrien 7/19-24 Lenawee 7/15-19	e 7/21-27 gton 7/21-27	e 7/22-28	W JERSEY New Egypt 7/20-26 Vineland 7/20-26	inty) //23-29	College Station 7/22-	WEST VIRGINIA (Counties)	Randolph 7/27
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# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Uredo nidularii P. Henn. a rust Det. J.M. Van Valkenburg	uredial	on leaves of bromeliad plants	Mexico	Brownsville	XX
Abgrallaspis sp. an armored scale Det. W.D. McLellan	adult	on leaves of bromeliad plants	Belize	New Orleans	FL
Acrolepia assectella (Zeller)  leek moth Det. D.M. Weisman	pupal	on onion leaves from baggage	Hawaii	Hawaii	CA
Metamasius sp.  a weevil Det. W.D. McLellan	larval	in bromeliad plants	Belize	New Orleans	XX
Omphisa anastomosalis (Guenée) sweetpotato vine borer Det. D.M. Weisman	larval	in swamp cabbage plants from baggage	Hawaii	Hawaii	WA
Periphyllus aceris (Koch) an aphid Det. M. B. Stoetzel	nymph	on maple leaves from aircraft quarters	s France	Boston	
Rhagoletis cerasi (Linnaeus)  European cherry fruit fly Det. D.M. Odermatt	larval	in cherries from baggage	France	Kennedy Airport	N
Otala lactea Müller a helicid snail Det. D.M. Odermatt	adult	with baggage as food	Portugal	Kennedy Airport	NY

Orthotylus nassatus, a European Plant Bug New to North America (Heteroptera: Miridae)

### Thomas J. | Henry 1/

ABSTRACT. The Palearctic mirid Orthotylus nassatus is reported for the first time from North America. A description of the adult male, figures of male genitalia, and a key to all of the eastern green Orthotylini are provided to separate nassatus from other closely related genera and species found in the eastern United States.

General collecting in Pennsylvania in 1973 yielded a mirid not known to occur in North America. I collected a single male of the plant bug Orthotylus nassatus (Fabricius) at Allentown, Lehigh County, Pennsylvania, July 5, 1973, on pear, Pyrus sp., heavily infested with pear psylla, Psylla pyricola Foerster, and one additional male in Dauphin County, 3 miles south of Hershey, July 4, 1977, at blacklight. These two records leave little doubt that this bug is established in Pennsylvania. Initially, identification was made early in 1976 using Southwood and Leston's (1959) key to the British Orthotylus and comparing their figures of male genitalia with those of my specimen. Confirmation was made by comparison of the Pennsylvania specimen with specimens collected in England and determined by G.E. Woodroffe and kindly loaned by W.R. Dolling, British Museum (Natural History).

Fabricius (1787) described <u>O. nassatus</u> in the genus <u>Cimex</u>. Later, Fieber (1861) transferred <u>nassatus</u> to <u>Orthotylus Fieber</u>, and Carvalho (1952) fixed <u>nassatus</u> as the <u>type of the genus</u>.

In Europe, this bug is widely distributed from Algeria to the British Isles (Carvalho 1958) and has been taken on Fraxinus, Quercus, Salix, and Tilia (Butler 1923). Little is known of the life history, but Southwood and Leston (1959) write that the adults are present from mid-July to September and that the eggs overwinter.

Orthotylus nassatus keys to 0. chlorionis (Say) (transferred to Diaphnocoris Kelton) in Knight (1923) and to 0. rossi Knight in Knight (1941). 0. nassatus is easily separated from other eastern Orthotylus by the male claspers and a fuscous mark on the underside of the first antennal segment. The following description will separate nassatus from all other eastern Orthotylus.

MALE. Length 4.48 mm, width 1.52 mm. Uniformly greenish, clothed with simple, pale, erect and semierect setae. Head: width 0.74 mm, vertex 0.36 mm. Rostrum: length ca. 1.10 mm, reaching middle of mesocoxae. Antennae: I, 0.38 mm, yellowish-green with broad fuscous mark on ventral aspect; II, 1.28 mm, yellowish-green, becoming more reddish on European specimens; III, 0.82 mm, greenish-yellow, more reddish on European specimens; IV, 0.50 mm, yellowish, reddish on European specimens: length 0.56 mm, width 1.14 mm. Hemelytra: translucent green, clothed with pale, semierect setae. Membrane: pale translucent, veins green. Venter: greenish-yellow. Legs: greenish-yellow, tibial spines pale brown, apex of last tarsal segment and claws fuscous. Male claspers: (Fig. 1-2). Tergal Process: (Fig. 3), T-shaped, near median line of genital tergite.

<sup>1/</sup> Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg, Pennsylvania 17120

Because there have been several new genera recognized (Henry 1976, Kelton 1961) and several generic transfers (Kelton 1965), there may be some difficulty in separating nassatus from all other eastern genera of Orthotylini (Orthotylina of Schuh 1976). The following key based largely on keys by Kelton and Knight will separate nassatus from all other closely related eastern genera.

## Key to the green Orthotylini of the eastern United States

1.	Base of tylus markedly produced and considerably ventrad of ventral eye margins
1'.	Base of tylus less angularly produced, not ventrad of eye margins2
2(1').	First antennal segment with a longitudinal black line on either side, these lines connecting on ventral side near apex
2'.	First antennal segment without longitudinal black lines, segment may possess single black mark on ventral surface
3(2').	Body clothed with scale-like or silky pubescence and simple erect or semierect setae4
3'.	Body clothed with simple erect or semierect setae only
4(3).	Clothed with silky pubescence; head broad with vertex three times as wide as dorsal width of eyes
4'.	Clothed with scale-like pubescence; head not broad and vertex much less than three times as wide as dorsal width of eyes
5(3').	Head black
5'.	Head green6
6(5').	Second antennal segment shorter than third segment  Brachynotocoris Reuter
6'.	Second antennal segment longer than third segment7
7(6').	Vertex broadly and deeply concave; male antennae armed with spines or protuberances
7'.	Vertex convex; male antennae never armed with spines or protuberances8
8(7').	Dorsum thickly spotted with green; inside of large areole minutely punctured and spotted with green

- 8'. Dorsum uniformly colored; may be marked with fuscous or green but never distinctly spotted with green; inside of large areole smooth and without green spots.....9
- 9(8'). Eyes relatively straight behind and set close to anterior margin of pronotum......Orthotylus Fieber
- 10(9'). Rostrum reaching middle of mesosternum; pronotum convex at base......Diaphnidia Uhler

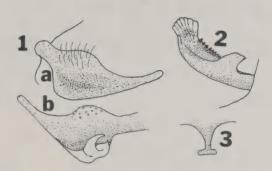


Fig. 1-3. Orthotylus nassatus. 1, left paramere in lateral view (a) and inside view (b); 2, right paramere, lateral view; 3, tergal process.

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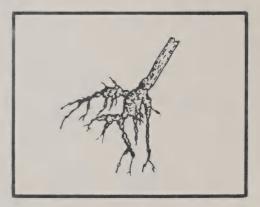


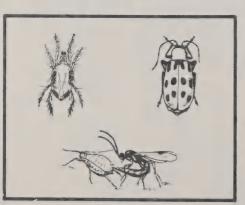


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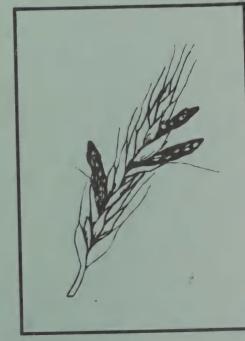
## Cooperative Reserve a5B823 ANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

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CPPR

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### COOPERATIVE PLANT PEST REPORT

### HIGHLIGHTS

### Current Conditions

Mostly FALL ARMYWORM along with CORN EARWORM and other noctuid larvae caused problems on many hosts in parts of several southeastern States. Soybeans needed treatment in Florida, potential loss in more fields than usual in North Carolina (p. 611), and controls poor in Alabama. (p. 618-619). Thousands of acres of sorghum and other grasses destroyed in Alabama and 80% of late corn and sorghum infested in North Carolina. Widespread and severe damage to corn and other plants expected to worsen in Virginia. (p. 614). Lawns damaged in Alabama. (p. 616). Peanuts needed treatment in Florida and damage continued in Alabama. (p. 619). First damaging infestations in many years for fall armyworm and other species on cotton in Alabama. (p. 620).

EYESPOT 100% prevalent in surveyed wheat in eastern and northern North Dakota and in Red River Valley of Minnesota. (p. 615-616).

HESSIAN FLY unusually heavy on wheat in some parts of western Kansas. High potential for damage in 1978 in southwestern Illinois. (p. 616).

OAT STEM RUST prevalence 25% and higher in 1 central and 3 southwestern counties of North Dakota. (p. 624).

STEWART'S WILT prevalence 20+% in corn in parts of west-central and central Missouri and northeastern Iowa. (p. 613).

EUROPEAN CORN BORER infested up to 100% of mid and late-season corn in northwestern Missouri. (p. 614).

Adults 100+ per night per light trap for CORN EARWORM in North Carolina, EUROPEAN CORN BORER in Minnesota, BEET ARMYWORM and CABBAGE LOOPER in Mississippi. (p. 628).

### Detection

For new county records see page 626.

Reports in this issue are for the week ending August 5 unless otherwise indicated.

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### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

### INSECTS

ARMYWORM (Pseudaletia unipuncta) - CALIFORNIA - Fresno County-4th and 5th instar larvae, 3-4 per field corn plant, damaged leaves at Fresno, field treated. (Dunnegan). San Joaquin County--larvae heavy in 12-acre field of sudangrass at Stockton. Many leaves chewed to midrib, treatment planned. (Sakata).

CORN EARWORM (Heliothis zea) - OKLAHOMA - Counts by county: Haskell, Muskogee, Sequoyah, and Le Flore--generally light on soybeans but averaged 1 per row ft in 1 field at Webbers Falls; Washita--up to 8 per sq ft in 1 alfalfa field; Marshall--1-3 per row ft in peanuts checked. (Arnold). FLORIDA - Alachua and Levy Counties -- corn earworm and FALL ARMYWORM (Spodoptera frugiperda) infested soybean fields; 500 of 3,000 acres needed treatment. (Baker). Jackson County--major problem now H. zea due to potential pod feeding. (Linker). NORTH CAROLINA - Coastal Plain and Piedmont--larvae hatched on soybean fields over entire area. Potential for loss very heavy in more fields than usual. Small larvae in Robeson, Jones, Lenoir, Pitt, Wilson, Johnston, Montgomery, and Chatham Counties. Up to 9 per ft of row in open canopy, postbloom, or blooming fields. About 80% of soybeans (compared with 50% in 1975) have open canopies because of drought stress. Statewide -- many fields will reach threshold level (2 per ft of row) due to heavy egg laying. (Wells et al.).

INDIANA - Knox County--first corn earworm adult of season in blacklight trap July 27 at Vincennes. (Judy). WISCONSIN - Cooler temperatures slowed development on corn but significant numbers expected by August 12. First adult of this flight at Oakfield blacklight trap July 29. (Lovett).

GREENBUG (Schizaphis graminum) - IDAHO - Bingham, Power, and Bonneville Counties--infested 2-15% of 20 late barley and spring wheat fields July 22. (Wheeler, Sandvol). OKLAHOMA - Counts on sorghum by county: Washita and Kiowa--up to 6,000 per leaf in few scattered fields, mostly greenbug with some YELLOW SUGARCANE APHID (Sipha flava) and CORN LEAF APHID (Rhopalosiphum maidis); Texas--few fields treated but greenbug light in many fields; Payne--decreased in 1 field. (Arnold). KANSAS - Eastern area-continued decrease on sorghum due to parasitism. (Hilbert et al.). Marion, Harvey, and Sedgwick Counties--0-18 per plant, some parasitism, plants from 8 inches to milk stage. (Bell).

NEBRASKA - Southeastern area--greenbug continued increase on sorghum week ending July 15. Burt County--1,000+ per leaf on 2 full-sized lower leaves of resistant grain sorghum in 1 field July 12. (Puls). Lancaster County--50-450 (averaged about 22) per plant in 4 sorghum fields. Parasitism 0-5% (averaged less than 2%) by Lysiphlebus testaceipes (a braconid wasp) July 12. (Keith). Lincoln County--up to 1,500 per plant in some early planted susceptible fields; averaged 100-200 per plant in resistant lines. (Campbell). Continued slow increase in southeastern counties on sorghum week ending July 22, some fields treated. Hall County-averaged 447 per plant in 1 field of 50-inch extended leaf height plants in boot stage. York County--averaged 458 per plant on 2 susceptible hybrids, averaged 145 per plant on 3 resistant hybrids in same field; plants in boot to bloom stages. (Monke).

Eastern Nebraska-greenbug continued increase on sorghum week ending July 29, economic in many areas. Saunders County--178-1,530 (averaged 792) per plant. Parasitism 1-7% (averaged 3.7%) by Lysiphlebus testaceipes. Sorghum in preboot to bloom. Damage ranged from reddening of lower leaves in field with 178 greenbugs per plant to severe reddening of 3 leaves and 1 lower leaf dead in field with 1,530 per plant. (Miller). Dixon County--greenbug averaged 1,500+ per plant in field of heading sorghum, lower 2 leaves dead. L. testaceipes parasitism less than 1%. (Witkowski). IOWA - Plymouth and Marshall Counties--lower grain sorghum leaves destroyed. (J.R. DeWitt). SOUTH DAKOTA - Statewide--greenbug moderate to heavy in majority of milo and forage sorghum fields. (Kantack).

POTATO LEAFHOPPER (Empoasca fabae) - OHIO - Counts per sweep of alfalfa by county: Delaware 7.3 (0.46 on soybeans), Guernsey 3.3, and Knox 1.2. (Drees). WISCONSIN - South-central, southeastern, and east-central areas-nymphs and adults 0-7 per sweep of alfalfa in surveyed area with heaviest count in Rock County third growth alfalfa. Counts of 7 per sweep of soybeans in Fond du Lac County field. Counts per 10 sweeps of vegetables: Central Sands--0-15 on snap beans, 0-2 on potatoes; Green Lake County--1 on snap beans; Walworth County--4 on lima beans. Garden potatoes in many areas dead due to "hopperburn". (Lovett).

TOBACCO HORNWORM (Manduca sexta) - NORTH CAROLINA - Lenoir County-3 of 241 fields reached threshold of 10% infestation. Average infestation 1% of plants. (Harper).

TOMATO HORNWORM (Manduca quinquemaculata) - NORTH CAROLINA - Granville County (Middle Belt)--9 of 36 tobacco fields at threshold. Larvae mostly in 4th and 5th instars, indicating population peaked. Treatments 90-95% effective. (Baumhover).

### CORN, SORGHUM, SUGARCANE

### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Statewide-continued most widespread corn disease. Infected most fields in Haskell County and other nearby areas in southwestern part of State. Prevalence/severity by county: Pottawatomie--50%/light, Shawnee--100%/moderate, Jefferson--80%/light, Douglas--in popcorn field 20%/not reported. (Sim). MISSOURI - Prevalence in corn by county July 26-27: Bates--100%; Henry--80%; Jasper--20%; Cedar, Pettis, Johnson--trace. Severity less than 0.5% except in Bates County (1%). (Foudin).

IOWA - Common maize rust prevalence/severity in corn by county week ending July 29: Winneshiek--80%/trace to 1%, Floyd--90%/5-10%, Cerro Gordo--80%/trace to 5%, Franklin--90%/trace to 5%, Buchanan--90%/trace to 1%, Clayton--99%/1-10%, Black Hawk--90%/5-20%, Linn--90%/trace. Current prevalence/severity: Buena Vista--99%/trace to 2%, Clay--99%/trace to 10%, Kossuth--80%/trace to 2%, Plymouth--90%/trace, Polk--90%/trace to 5%. (Williams).

MINNESOTA - South-central and southwestern areas--common maize rust prevalence 100%/severity 5% in all corn fields surveyed. (Stromberg). NORTH DAKOTA - Cass County--found on most breeding lines in field plots at Fargo, severity ranged trace to 3% of leaf surface. (Jons).

COMMON SMUT (<u>Ustilago maydis</u>) - KANSAS - Shawnee (2 corn fields) and Wabaunsee (1 popcorn field) Counties--trace. (Sim). MISSOURI - Pettis, Johnson, Henry, Jasper, and Vernon Counties--prevalence in few to 4% of corn plants July 26-27. (Foudin). IOWA - Prevalence in corn by county week ending July 29: Linn--5%, Winneshiek--1%, Black Hawk--5%, Buchanan--2%. Current prevalence: Buena Vista--7%; Sioux, Plymouth--trace, Polk--trace to 2%; Webster--5%. (Williams). MINNESOTA - South-central and southwestern areas--prevalence ranged trace to 10% in 10 of 13 corn fields, 30% in 1 river bottom field. (Stromberg).

SOOTY STRIPE (Ramulispora sorghi) - KANSAS - Douglas County--prevalence 80-100% in 4 of 7 sorghum fields near Clinton. (Sim).

CORN BROWN SPOT (Physoderma maydis) - KANSAS - Shawnee County-prevalence about 10% in irrigated corn field. (Sim).

STEWART'S WILT (Erwinia stewartii) - MISSOURI - Prevalence/severity in corn by county July 26-29: Jasper--10%/10-25%; Henry--90%/trace to 5%; Vernon, Cedar--75%/2-5%; Pettis--20%/trace to 2%; Bates--trace/trace. Corn in tassel and silk stages at all sites. (Foudin). IOWA - Black Hawk County--10-30% prevalence/30-40% severity in corn. (Williams).

HOLCUS SPOT (Pseudomonas syringae) - KANSAS - Wabaunsee County-prevalence about 70% in 1 popcorn field. (Sim).

BACTERIAL STRIPE (Pseudomonas andropogonis) - IOWA - Prevalence/severity in corn by county: Dickinson--10%/trace to 10%; Polk--80%/5-30%. (Williams).

SORGHUM BACTERIAL STREAK (Xanthomonas holcicola) - KANSAS - McPherson County--affected 100% of plants in 1 sorghum field. (Sim).

MAIZE DWARF MOSAIC VIRUS - KANSAS - Prevalence by county: Shawnee--trace in 2 corn fields; Wabaunsee--30% in 1 popcorn field; Douglas--trace in popcorn field, red leaf stage on 5% of plants in sorghum field. (Sim).

### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Douglas County--second generation infested 50% or more of plants in some popcorn fields. (Sim). Shawnee County--infested 2% of sorghum stalks in milk stage near head in 1 field, some head breakage. (Hilbert, Van Meter). NEBRASKA - Northeastern area--about 80% of first generation European corn borer larvae pupated and 20% emerged week ending July 22. Cedar, Madison, and Pierce Counties--second generation larvae trace on corn. Dixon County--900 adults in light trap July 19. (Witkowski). Hamilton County--856 second generation adults in 1 light trap July 15. (Cranfill, Miller). Fillmore County--second generation larvae infested 30-58% of seed corn plants in 8 fields. (Monke). Eastern area--second generation adults

heavy week ending July 29, egg laying well underway. Dixon and Madison Counties--European corn borer adults averaged 100-200 and 400+ per night per light trap, respectively. Wayne, Cedar, Madison, and Pierce Counties--fresh egg masses on 0-50% (averaged 5%) of plants in 75 corn fields. (Witkowski). Dawson and eastern Lincoln Counties--adults up to 6 per sq yd in field margins of 100 corn fields, fresh egg masses on 0-15% of plants. (Raun).

MISSOURI - Central Pest Management areas--second generation European corn borer egg masses 0-34 (averaged 6.1) and 0-20 (averaged 8.9) per 100 plants in 2 areas. Northwestern area-infested 30-100% of mid-season and late-planted corn, second generation larvae 1.5-8 per plant. (Munson). KENTUCKY - Washington County--second generation early instars caused "shotholes" in corn week ending July 29. (Greenwell). OHIO - Coshocton and Perry Counties--almost half-grown second generation larvae burrowed into tassels of sweet corn. (Drees).

WISCONSIN - European corn borer adults in blacklight traps still heavy in sweet corn areas. Egg laying continued heavy on susceptible corn, particularly sweet corn and garden popcorn. Second generation larvae up to 3rd instar in advanced Rock County location, while first generation 5th instar larvae still in Fond du Lac County. Intensive control applications made to sweet corn. (Lovett). NEW HAMPSHIRE - Rockingham County--first generation adults emerged in sweet corn week of July 25. Southeastern area-laid eggs in fields week of August 1. (Bowman).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - Stafford County--infested 100% of plants on 30-inch corn, larvae (up to 0.5 inch long) 5-30 per whorl week ending July 29. (Brooks).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Counts on sorghum by county: Washita and Kiowa--infested 25-100% of plants; Major--larvae 2-3 per plant. (Arnold). KANSAS - Harvey County--all larval stages infested 21% of whorls of 18-inch sorghum near Sedgwick. (Bell). ALABAMA - Southern, central, western, and lower counties of northern area--very heavy populations of all size larvae damaged all and destroyed thousands of acres of grain sorghum, sudan-sudex, Johnsongrass, and millets. (Yates et al.). Talladega County--larvae of fall armyworm and CORN EARWORM (Heliothis zea) 10-54 per stalk of milk stage corn in all 300 acres at I dairy farm, larvae half to three-fourths grown. Almost leafless corn cut for silage. Larvae will infest most of acreage before harvest. Most of corn treated twice with poor control. S. frugiperda to H. zea noted at 95:5. Similar conditions in Chambers, Clay, and Lee Counties. (Bass et al.).

NORTH CAROLINA - Northern Coastal Plain and entire Piedmont--fall armyworm damage continued to late-maturing corn (grain and silage) and sorghum. Infested 80% of plants with average of 2 larvae per plant in five 50-acre fields. (Cooper et al.). VIRGINIA - State-wide-widespread and severe damage for second consecutive year. Reported from Washington, Pulaski, Tazewell, Carroll, Rockingham, Floyd, Botetourt, Augusta, Accomack, and Northampton Counties past 10 days. Most damage on late-planted corn but damage can be found on other plants, including tomatoes and cabbage. Damage expected to worsen in State. (Allen).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - NEBRASKA - Morrill, Kimball, and Banner Counties--egg masses and/or larvae on 3.3% of plants in 26 of 30 corn fields July 21; infested 10-33% of plants in remaining fields, treatment recommended. Larvae in 2nd and 3rd instars and not in ear tips. Most corn pollinated. (Marquart). Dundy County--2nd to 4th instar larvae infested 0-15% of ears (averaged 2%) in 70 corn fields July 18-26. Usually 1 larva per ear tip. Treatment recommended for 17 of the 70 fields. Dawson and eastern Lincoln Counties--treatments needed in 1 of 100 fields July 18-26. Less than 1% of plants infested in most fields. Larvae in 2nd and 3rd instars, no fresh egg masses since July 18. (Raun).

CORN ROOTWORMS (Diabrotica spp.) - NEBRASKA - Cedar, Madison, and Pierce Counties--adults up to 0.9 per corn plant July 19. (Witkowski). Wheeler County--averaged 1-2 per corn plant. (Bush). Nance--adults averaged 4.5 per plant in 1 seed corn field. Corn beginning to silk, leaf feeding damage extensive. (Monke). MINNESOTA - Adults averaged per acre of corn by district: West-central--28,994, southwest--36,392, southeast--56,650. Ratios of NORTHERN CORN ROOTWORM (D. longicornis) to WESTERN CORN ROOTWORM (D. virgifera) by district: West-central--80:20, southwest--97:3, and southeast--90:10. (Sreenivasam).

TENNESSEE - New D. longicornis county record. Madison County-adults collected from 30 acres of corn at Jackson, July 14, 1977. Collected and determined by C.R. Patrick. No damage. (Gordon, White). ILLINOIS - New D. virgifera county record. Bond County-on corn 3 miles west of Mulberry Grove, August 3, 1977. Collected by J.L. Wedberg. Determined by J. Bouseman. (Black). INDIANA - D. virgifera adult mean per 25 corn stalks by district: North-west--17.5, north-central--21.8, and northeast--24.2. (Meyer). OHIO - Wayne County-D. longicornis emerged and averaged 6 per corn plant. Larval feeding destroyed 2-3 root nodes per plant. Adults on silks averaged 12 per ear. (Szatmari-Goodman).

GRASSHOPPERS - IOWA - Adair, Madison, Ringgold, and Union Counties--Melanoplus femurrubrum and M. differentialis nymphs and adults 5-10 per field corn plant and 10-25 per sq yd in fence rows. Ear tips chewed off and damage to ears through husk is common. Treatments applied but adult control poor. (J.R. DeWitt).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - Counts on sorghum by county: Osage--mostly nymphs, averaged about 250 per plant, 8 acres dead in 20-acre field of 8-inch sorghum (Hilbert); Marion, Harvey, and Sedgwick--averaged 0-35 per sorghum plant from 8-inch to boot stage, stunted some 8-inch plants in portion of field replanted after being destroyed earlier by chinch bugs near Hillsboro, growth of sorghum not much retarded by chinch bug populations in most fields in area (Bell).

### SMALL GRAINS

### DISEASES

EYESPOT (Pyrenophora trichostoma) - NORTH DAKOTA - Eastern and northern areas--prevalence 100% on hard red spring wheat and durum wheat in all counties surveyed week ending July 29. As

plants mature, eyespot severity on lower leaves difficult to determine. Severity on flag leaf increased past 14 days, with 10-25% of leaf area infected. Golden Valley, Slope, and Stark Counties--prevalence 100% on hard red spring and durum wheat; severity on flag leaves 10-25%. Wheat in mid-dough to ripe stages. (Jons). MINNESOTA - Red River Valley from Crookston northward to Canadian border--in every wheat field surveyed week ending July 29, prevalence 100%, severity 30-40% on flag leaves. (Stromberg).

WHEAT LEAF RUST (Puccinia recondita) - NORTH DAKOTA - In all counties surveyed—prevalence 100%/severity 1-5% on hard red spring wheat cultivar Waldron. Loss negligible due to advanced maturity. Crop season 7-14 days earlier than average with widespread harvest of all small grains. (Jons).

### INSECTS

HESSIAN FLY (Mayetiola destructor) - KANSAS - Western area--spring infestations unusually heavy in some wheat fields, maximum tillers infested by county: Norton--28%, Thomas--18%, Gove 22%, Scott--38%, Russell--18%, and Osborne--12%. (Hatchett). ILLINOIS - Central and southwest districts--populations increased with high 1978 damage potential in southwest district. (Black).

### TURF, PASTURES, RANGELAND

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Statewide--all larval instars damaged lawn grasses. Montgomery County--20 per sq ft in some areas. (Kerr et al.).

A SOD WEBWORM (Crambus trisectus) - MARYLAND - Howard County--2 per sq ft in 70 acres of bluegrass sod at Florence, treatments applied. Adults sharply increased to 100 per night per trap; increases in field populations expected in 10 days. (Hellman, Pinto).

RANGE CATERPILLAR (Hemileuca oliviae) - TEXAS - Dallam County--0.2 per sq yd north and south of Texline, 0.04 east of Texline July 22. (Patrick).

A SCARAB (Ataenius spretulus) - MARYLAND - Calvert County--15-80 per sq ft in collars and fairways of golf course at Dunkirk, treatments applied to collars, majority emerged as adults 10 days ago with second generation expected in late August. (Hellman, Pinto).

GRASSHOPPERS - VIRGINIA - Eastern area--continue to plague crops in many parts. Prince Edward County--ranged fewer than 1 to 30+ per sq yd. About 40% Melanoplus bivittatus, 40% M. femurrubrum, 15% M. differentialis, and 5% other species. Low probability for denuded, erodable pastureland from this year's population. Grasshoppers serious threat to agriculture in areas surveyed. (Allen).

### FORAGE LEGUMES

### DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Pottawatomie and Jefferson Counties--in all alfalfa fields surveyed, prevalence 80-100%/severity moderate, some defoliation in all fields. (Sim).

TARGET SPOT (Corynespora cassicola) - MISSOURI - Pettis County-prevalence 100%/severity trace to 4% at 1 soybean site July 26-27. (Foudin).

BROWN STEM ROT (Phialophora gregata) - WISCONSIN - Rock County-developing in 1 soybean field. (Lovett).

### INSECTS

VARIEGATED CUTWORM (Peridroma saucia) - NEBRASKA - Northeast district--up to 15 larvae per sq yd retarded regrowth of third cutting alfalfa week ending July 29. (Witkowski). IOWA - Plymouth and Grundy Counties--economic damage to continue on alfalfa regrowth, larvae 0.5-1 inch long. (J.R. DeWitt).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - South-central and southeastern areas--appearance on alfalfa, 0-5 per 10 sweeps, marked beginning of another generation. (Lovett).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Fresno County-generally 3rd and 4th instar larvae 5 per 25 sweeps of alfalfa, moderate to heavy, throughout area. (Dunnegan).

GARDEN WEBWORM (Loxostege rantalis) - MISSOURI - Nodaway County-larvae 8-53 per 10 sweeps in 3 alfalfa fields. Defoliation 80% due to garden webworm and heavy DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis) populations. (Munson).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - UTAH - New county records. Grand County--on alfalfa at Moab July 12, 1977. San Juan County--on alfalfa at Blanding, July 13. Collected by R.S. Roberts. Determined by G.F. Knowlton. (Roberts, Knowlton).

PEA APHID (Acyrthosiphon pisum) - UTAH - Sanpete and Sevier Counties- $-5\overline{0-200}$  per sweep in more succulent alfalfa fields. (Knowlton et al.).

### SOYBEANS

### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - MISSOURI - Prevalence/severity in soybeans by county July 26-27: Henry--30%/1-2%, mostly on lower leaves; and Cedar--10%/trace to 3%. (Foudin). IOWA - Prevalence/severity in soybeans by county week ending July 29: Madison--5%/trace; Chickasaw--5%/trace. Current prevalence/severity: Sioux--20%/trace; Palo Alto--60%/trace to 5%. (Williams).

TENUISSIMA LEAF SPOT (Alternaria tenuissima) - MISSOURI - Pettis County--prevalence 100%/severity trace at 1 soybean site July 26-27. (Foudin).

FROGEYE LEAF SPOT (Cercospora sojina) - MISSOURI - Pettis County-prevalence 90%/severity trace at 1 soybean site July 26-27. (Foudin).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - MISSOURI - Pettis County--prevalence 75%/severity trace to 3% at 1 soybean site July 26-27. (Foudin).

PELLICULARIA ROOT AND STEM ROT (Pellicularia filamentosa) - IOWA - Prevalence in sampled soybean fields by county: Hamilton--10% and Kossuth 50%. (Williams).

PHYTOPHTHORA ROOT ROT (Phytophthora megasperma) - IOWA - Grundy County--infected trace numbers of plants in 1 soybean field. (Williams).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - MISSOURI - Prevalence/severity in soybeans by county July 26-27: Pettis, Johnson, Bates, Jasper, Vernon, and Cedar--100%/trace to 5%, mostly on lower leaves; Henry--75%/trace. (Foudin). IOWA - Prevalence/severity in soybeans by county week ending July 29: Cerro Gordo--20%/trace to 10%; Buchanan--20%/trace to 5%. Current prevalence/severity: Webster--10%/trace; Palo Alto--20%/trace to 10%. (Williams). MINNESOTA - South-central and southwestern areas--prevalence 100%/severity 5-10% in sampled soybean fields, severe on lower leaves only. Many fields at pod-fill stage. (Stromberg).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - IOWA - Prevalence/severity in soybeans by county week ending July 29: Chickasaw--70%/trace to 5%, Franklin--30%/trace to 5%, Black Hawk--80%/trace to 30%, and Buchanan--80%/trace to 5%. Current prevalence/severity: Buena Vista--50%/trace to 5%; Clay--90%/trace to 5%; Kossuth--90%/trace to 2%; Plymouth, Palo Alto--90%/trace to 5%; Webster--90%/trace. (Williams).

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - TENNESSEE - New county record. Marshall County-3 new infested soybean fields near Laws Hill and Verona, August 2, 1977. Collected by P.D. Foster. Determined by R.E. Harrison. Maury County-1 new infested field. (Harrison, Foster).

SOYBEAN MOSAIC VIRUS - IOWA - Soybean plants infected by county week ending July 29: Marshall--30%, Jasper--10%, Adair--15%, Wapello--5%, and Linn--1%. Clay and Webster Counties--current prevalence trace in sampled soybean fields. (Williams).

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Talladega and many counties statewide--this species, BEET ARMYWORM (Spodoptera exigua), YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli), CORN EARWORM (Heliothis zea) 1-12 per ft of row in 2 to 10-inch soybeans in many fields. Dallas County--larvae, half to three-fourths grown, defoliated 60-80% of 60-acre field in bloom stage; control

efforts failed. Statewide controls for fall armyworm general and poor; thousands of acres received 3 or more applications before pod set. The 1.5 million acres of soybeans in State could have 3-10 applications of insecticides at a cost of \$5-8 million and potential yield loss of 25-60%. (Henderson et al.). ARKANSAS - Southeastern area--mostly pupae on soybeans, reducing some of leaf-feeding activity. (Wall).

GREEN CLOVERWORM (Plathypena scabra) - ARKANSAS - Larvae per 3 row ft of soybeans by county: Jackson-2.5, Lee-2.2, Desha-0.6. (Dumas). KENTUCKY - Christian County-larvae averaged 1.6 per 10 sweeps in 6 soybean fields week ending July 29, averaged 6.1 in similar fields 14 days ago. Larvae expected to increase in near future as adults heavy. (Sloderbeck).

WISCONSIN - Rock County--green cloverworm averaged 1 per linear ft of soybeans, larvae small, population likely to increase with continued hatching of eggs. Fond du Lac and Green Lake Counties--trace numbers. (Lovett). MINNESOTA - Larvae per row ft of soybeans by county: Brown and Cottonwood--averaged 1-2, Steele-up to 10, and Olmsted--averaged less than 1 at Rochester. (Sreenivasam).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - IOWA - Lee, Louisa, Henry, Van Buren, Davis, and Johnson Counties--2-125 per soybean leaflet, damage economic, fields treated. Damage expected to increase in drought-stressed fields. (J.R. DeWitt).

### **PEANUTS**

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Alachua and Levy Counties-about 80% of larval species, treatment required on 800 of 2,000 acres of peanuts; CORN EARWORM (Heliothis zea) remaining 20%. (Baker). Jackson County-S. frugiperda and H. zea heavier than usual for time of year. Up to 40 larvae per row ft in some fields. (Linker). ALABAMA - Southeastern area-mainly fall armyworm and CORN EARWORM (Heliothis zea) with BEET ARMYWORM (S. exigua), YELLOWSTRIPED ARMYWORM (S. ornithogalli), GRANULATE CUTWORM (Feltia subterranea), and LESSER CORNSTALK BORER (Elasmopalpus lignosellus) still heavy and damaging to the 200,000 peanut acres. Controls general. (Walton et al.). OKLAHOMA - Marshall County--infestations averaged 75% of Florunner peanut plants. (Arnold).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Marshall County--terminal infestations averaged 80% in peanuts. (Arnold).

### COTTON

### INSECTS

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Jackson, Harmon, Greer, and Kiowa Counties--no adults in 81 pheromone traps, punctured squares 0-25% but averaged only 3% in Harmon County. A few fields treated in this county. (Arnold). TENNESSEE - Punctured squares 0-10% in surveyed cotton fields. Averaged 2% for infested fields. First generation emerged. (Locke et al.).

BOLLWORMS (Heliothis spp.) - NEW MEXICO - Dona Ana County--one BOLLWORM (H. zea) Tarva per 10 squares of cotton at Anthony area week ending July 29. Eddy County--populations in cotton near Lake McMillan well above normal for this time of year and should be watched. (Staff). OKLAHOMA - H. zea counts on cotton by county: Washita and Caddo--damaged squares 10-25% in few isolated fields, larvae 0-4 per 100 terminals in most fields; Harmon--damaged squares 3-4% with beneficials keeping bollworms under control. (Arnold). ARKANSAS - Southeastern area--adults increased in light traps, H. virescens outnumbered H. zea adults 3 to 1 in some counties. Heliothis eggs up to 75 per 56 row ft of cotton in Jefferson County. (Wall). Statewide--32% of fields with Heliothis eggs and larvae, and 10% of fields with Heliothis damaged squares above treatment level. (Barnes).

ALABAMA - Statewide--most fields above economic levels, all Heliothis spp. larval instars 10-200 per 100 cotton stalks. Adult flights and egg laying greatly decreased past 5-7 days in southern and central areas, increased in northern area. (McQueen). TENNESSEE - Western area--0-5 Heliothis sp. eggs and/or larvae per 100 cotton terminals beginning to "cutout" or is "cuttingout". Generally more larvae than eggs on early cotton. Eggs and/or larvae 5-15 per 100 terminals in late or rank cotton; eggs heavier than larvae in many rank fields. Fayette, Tipton, and Shelby Counties--some fields considered "hotspots" with 15-30 eggs and larvae per 100 terminals. Franklin and Lincoln Counties--averaged 4 eggs and/or larvae per 100 terminals in fields surveyed. (Manson et al.).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Statewide-first damaging infestation in 60 years of small larvae mixed with BOLLWORMS (Heliothis spp.), 1-6 per cotton stalk, throughout the 500,000 cotton acres. Damage by S. frugiperda will probably worsen when larvae enter bolls. (Freeman et al.).

TARNISHED PLANT BUG (Lygus lineolaris) - ALABAMA - Madison County-This species and CLOUDED PLANT BUG (Neurocolpus nubilis) heavier than usual, 25-30 per 100 row ft in several cotton fields. (Freeman).

### TOBACCO

### INSECTS

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Trousdale, Smith, Sumner, Wilson, and Macon Counties--10 of 30 tobacco fields above control level, larvae 0-1,125 per acre. (Gregory).

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Trousdale, Smith, Sumner, Wilson, and Macon Counties--5 of 30 tobacco fields above control level, larvae 0-1,594 per acre. (Gregory).

### MISCELLANEOUS FIELD CROPS

### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - KANSAS - McPherson County--adults averaged about 5 per sunflower plant (40% bloom), few small larvae on oldest heads. (Bell, Nuttelman). SOUTH DAKOTA - Brookings County--larvae 187-430 (averaged 250) per head in field of domestic sunflowers near Brookings. Larvae newly hatched to three-fourths grown. (Kantack).

### POTATOES, TOMATOES, PEPPERS

### DISEASES

POTATO AND TOMATO LATE BLIGHT (Phytophthora infestans) - WISCONSIN - Langlade County--confirmed in I heavily infected 40-acre potato field and few other scattered fields at Antigo. (Lovett).

### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - Merrick County--severely damaged 2 fields of center pivot-irrigated potatoes (total of 230 acres) near Archer week ending July 15. Damage will cause about 40-50% crop loss or about \$100,000. (O'Keefe).

TOMATO PINWORM (Keiferia lycopersicella) - OKLAHOMA - New county record. Stephens County-heavy in tomato leaves at unspecified location on August 1, 1977. Specimens received from E. Cleveland. Determined by D.C. Arnold. (Arnold).

A SPIDER MITE (Tetranychus evansi) - CALIFORNIA - New county record. Riverside County-90 nymphs and adults per leaf on back-yard tomatoes at Riverside, July 29, 1977; treatment required. Collected by E. Reeves. Determined by T. Kono. (Reeves).

TWOSPOTTED SPIDER MITE ( $\underline{\text{Tetranychus}}$   $\underline{\text{urticae}}$ ) - WASHINGTON - Adams County--nymphs and adults destroyed  $\underline{\text{40-acre}}$  field of Norgold potatoes at Othello week ending July 29. (Smith).

### HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) heavily mined 60-75% of leaves in 1.50 acres of tomato at Waianae Valley, Oahu. Infestations and damage moderate to heavy (30-50% of leaves heavily mined) on 0.50 acre of pole beans and 3 acres of green onion at same location. CARMINE SPIDER MITE (Tetranychus cinnabarinus) heavy, 20+ per sq inch, on all leaves and foliar damage moderate on 0.50 acre of sweet corn at Waianae Valley. Moderate to heavy, 10-20 per sq inch of leaf area, on 0.25 acre of eggplant and 0.50 acre of tomato at same location. (L. Nakahara).

Fruits and Nuts - All stages of COCONUT MEALYBUG (Nipaecoccus nipae) with extensive sooty mold in 5 acres of commercial guava at Opihikao, Hawaii Island. (Hirae).

### **DECIDUOUS FRUITS AND NUTS**

### DISEASES

STONE FRUIT BACTERIAL SPOT (Xanthomonas pruni) - KANSAS - Douglas County--prevalence 100% in peach orchard. (Sim).

### INSECTS

FALL WEBWORM (<u>Hyphantria cunea</u>) - OREGON - Becoming heavy after several years of light populations. Wheeler County-heavy on cottonwood along Rock Creek, 20-25 miles east of Mitchell. Wallowa County-heavy on chokecherry along east side of Wallowa Lake (2nd and 3rd instar larvae of red-headed variety). (Penrose) Marion County-very marked increase at Salem appeared to be most prevalent on ornamental and edible tree fruits and on walnut. (Westcott).

TWOSPOTTED SPIDER MITE (<u>Tetranychus urticae</u>) - OKLAHOMA - Wagoner County--30-50 per leaf in parts of some apple and peach orchards. (Arnold). MISSOURI - Central area--0-2 per leaf on delicious apples. (Enns).

EUROPEAN RED MITE (<u>Panonychus ulmi</u>) - MISSOURI - Central area--0.5-1.5 (average 0.35) per leaf in 2 Red Delicious apple orchards. (Enns).

### FOREST AND SHADE TREES

### INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) - NEW HAMPSHIRE - Coos County-populations appeared to be collapsing in heavily infested balsam fir in northern area July 26 to August 1. Damage to older trees severe and combination of diseases, parasites, and lack of food greatly reduced adult emergence, compared with 1976 figures. Adult emergence in 1977 heaviest, 90.5%, well outside of heavily infested area in eastern part of county and lightest, 24%, at lower Perry Stream site, in center of heavily infested area. Parasitism heaviest, 25.6%, at Back Lake and lightest, 0%, outside of heavily infested area. Non-emergence due to unknown causes heaviest, 50%, at lower Perry Stream site and lightest, 6.9%, in southern Pittsburg, outside of main infestation. Disease and mortality much lighter outside of main infestation area. Deteriorating food sources may be major cause of non-emergence of adults in most heavily infested area. Major parasites reared during spruce budworm survey in 1977: Itoplectis conquisitor and Ephialtes ontario (ichneumonid wasps), Aplomya caesar and Phryxe pecosensis (tachinid flies). One specimen of Brachymeria intermedia (a chalcid wasp) reared. E. ontario about 3 times as commonly reared as I. conquisitor. A. caesar most common in earlier pupal collections; P. pecosensis in later collections. (J.F. Burger).

MOURNINGCLOAK BUTTERFLY (Nymphalis antiopa) - WEST VIRGINIA - New county record. Lincoln County--larvae completely defoliated 5 small willow trees at Alvin Creek, July 13, 1977. Collected by P. Jarrett. Determined by A.R. Miller. (Jarrett).

TULIPTREE APHID (Macrosiphum liriodendri) - CALIFORNIA - New county record. Marin County--adults on tuliptree at San Rafael July 27, 1977. Collected by G. Hiroshima and C. Twohy. Determined by T. Kono. (Hiroshima, Twohy).

### MAN AND ANIMALS

### INSECTS

HORN FLY (<u>Haematobia</u> <u>irritans</u>) - NEBRASKA - Lincoln and Dawson Counties--adults averaged 500+ per head on untreated cattle July 20 and 26. (Campbell). ILLINOIS - Averaged per head (10 animals per herd, 1 herd per county unless otherwise stated) by county: De Witt--154, Logan--240, Grundy--124, Ogle (2 herds)--206, Henderson (2 herds)--180, and Adams--210. (Moore). FLORIDA - Alachua County--heaviest of year, 840 per head in small beef herd at Gainesville. (Weidhaas).

STABLE FLY (Stomoxys calcitrans) - NEBRASKA - Lincoln and Dawson Counties--averaged 10-15 per leg on untreated cattle July 26. (Campbell). ILLINOIS - Averaged per head (10 animals per herd, 1 herd per county unless otherwise stated) by county: De Witt--5.2, Logan--5.8, Grundy--20.5, Ogle (2 herds)--17.6, Henderson (2 herds)--8.0, and Adams--8.6. (Moore).

FACE FLY (<u>Musca autumnalis</u>) - NEBRASKA - Lincoln and Dawson Counties--averaged 10 per face on untreated cattle July 26. (Campbell). ILLINOIS - Averaged per face (10 animals per herd, 1 herd per county unless otherwise stated) by county: De Witt-26.8, Logan--12.1, Grundy--22.4, Ogle (2 herds)--13.0, Henderson (2 herds)--6.0, and Adams--16.5. (Moore).

A MOSQUITO (Aedes sollicitans) - OHIO - New county record. Stark County--collected in light trap at Massillon week of July 22, 1977. Collected and determined by R.L. Berry. (Drees).

### BENEFICIAL ORGANISMS & THEIR ENEMIES

2(32) (977

### INSECTS

A BRACONID WASP (Microctonus aethiopoides) - OHIO - New county records. Warren County-April  $\overline{27}$ ,  $\overline{1977}$ , at State Highway 63 and National Interstate Highway 75. Washington County-May 6, along State Highway 60. Reared from Hypera postica (alfalfa weevil) collected by J.K. Flessel and  $\overline{S}$ . Nelson. Determined by J.K. Flessel. (Drees).

AN ICHNEUMONID WASP (<u>Diaparsis</u> sp.) INDIANA - New county record. Huntington County--parasitized 3% of <u>Oulema melanopus</u> (cereal leaf beetle) larvae in 1 oat field in <u>Clear Creek Township</u>, May 31, 1977. Collected by L. Cummings. Determined by P. DeWitt. (T.L. Burger). MARYLAND - New county record. Cecil County--parasitized 11% of <u>O. melanopus</u> larvae in 1 oat field near Rising Sun, June 8, 1977. Collected by R. Remsburg. Determined by P. DeWitt. (T.L. Burger).

A EULOPHID WASP (Tetrastichus julis) - Recoveries of 20+% parasitism for Oulema melanopus (cereal leaf beetle) larvae by State and county, 1 oat field each, May 11 to June 22. INDIANA - Huntington-50% in Jackson Township. New county record for Whitley-18% in Washington Township June 2, 1977. Collected by L. Cummings. Determined by P. DeWitt. WEST VIRGINIA - Mason-20% in Arbuckle Magisterial District. PENNSYLVANIA - New county record, Fayette-35% in Bullskin Township, June 22, 1977. Collected by M. Garra. Determined by V. Montgomery. NEW YORK - Jefferson-50% in LeRay Township. (T.L. Burger).

### FEDERAL AND STATE PROGRAMS

### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - OREGON - Union County-almost all elms dead, except few treated trees at Union. (Penrose). CALIFORNIA - Solano (at Vallejo) and Napa Counties--2 previously infested sites confirmed with diseased elms; Sonoma County--1 new site at Santa Rosa. Diseased trees destroyed as soon as possible.(Krass).

OAT STEM RUST (<u>Puccinia</u> graminis var. <u>avenae</u>) - NORTH DAKOTA - Prevalence/severity in oats by county: Golden Valley 25%/1%, Slope 25%/1%, Stark 100%/1%, and Stutsman 100%/30%. (Jons).

### INSECTS

GRASSHOPPERS - WASHINGTON - Yakima (at Yakima) and Whitman (at Uniontown) Counties--late instar Melanoplus spp. nymphs and adults 3-10 per plant, heavy, in green areas of rangeland, orchards, and grain fields. (Meyer, Luce). UTAH - Beaver County--treatments applied to 5,184 acres of planted range grasses for grasshoppers in Fish Lake National Forest above 11,000-ft elevation east of Beaver. Uintah County--864 acres treated above 10,000-ft elevation in Ashley National Forest near Vernal. (Crowe). Salt Lake and Weber (at North Ogden) Counties--some migration from foothill range and vacant lots at alfalfa and home gardens. (Hassell, Knowlton). NEBRASKA - Lincoln and Dawson Counties--grasshopper nymphs and adults averaged 20+ per sq yd of rangeland July 20. (Campbell).

NORTH DAKOTA - Grasshopper adult survey completed (89 stops made) in following counties week ending July 29. Field/margin counts per sq yd by county: Dickey--0-10/not given; La Moure--fewer than 1-3/fewer than 1-11; Sargent--1-10/0-10; Ransom--0-3/0-3. Melanoplus sanguinipes, M. bivittatus, M. dawsoni, M. femurrubrum, and M. packardii dominant. Adult survey completed (112 stops made) in cropland areas in Billings, Golden Valley, Grant, Hettinger, and Slope Counties, most populations noneconomic. Grant County--up to 12 per sq yd of alfalfa; M. differentialis, M. bivittatus, and M. packardii dominant; Ageneotettix deorum up to 8 per sq yd of crested wheatgrass. Slope County--M. bivittatus up to 25 per sq yd in some field margins. Very little crop damage; most small grain fields near harvest or harvested. Currently, adult cropland survey completed in northeastern Cass, Kidder, and Richland Counties. Field/margin counts per sq yd by county: Cass--fewer than 1-8/0-10; Richland--0-8/0-8. Melanoplus bivittatus.

 $\underline{\text{M. sanguinipes}}$ , and  $\underline{\text{M. dawsoni}}$  dominant, some  $\underline{\text{M. femurrubrum}}$  and  $\underline{\text{M. differentialis}}$ . Kidder County--5 of 28 stops with 3-7 per sq yd.  $\underline{\text{M. femurrubrum}}$  3-4 per sq yd of alfalfa and  $\underline{\text{M. bivittatus}}$  up to 7 per sq yd in marginal areas. No crop damage. (Brandvik, Scholl).

GYPSY MOTH (Lymantria dispar) - VIRGINIA - East-central area-many adult males trapped this summer. Counties with largest number of positive catches: Accomack, Northampton, Mathews, Middlesex, and Gloucester. Positive finds collected from Mathews County and from Independent Cities of Virginia Beach, Chesapeake, and Arlington. (Allen). WEST VIRGINIA - Jefferson County--14 male moths taken in 7 sex-lure traps. (Cole).

JAPANESE BEETLE (Popillia japonica) - KENTUCKY - Eastern Madison County--adult feeding reduced corn yields 10-20% week ending July 29. Nearly 1,400 acres treated. Most fields sprayed too late to significantly reduce silk feeding. (Sloderbeck). OHIO - Adults by county: Guernsey--1.3 per sweep of alfalfa and 2.8 per corn ear; Knox--0.6; Perry--heavy, fed on foliage of potatoes and some tomatoes; Noble--almost completely skeletonized many sassafras trees. (Drees). Wayne County--eggs, 20% 1st instar, 70% 2nd instar, and 3rd instar larvae about 15 per sq ft of turf, unusually early; adult damage heavy in soybean fields. (Lawrence). WEST VIRGINIA - Jefferson and Berkeley Counties--adult damage to corn silk scattered. Damage trace in most fields, about 5% of fields showed 10-20% ears completely desilked. Adults and damage heavy to sassafras trees, wild grapes, and rose bushes; defoliation 90-100%. (Hacker).

SCREWWORM (Cochliomyia hominivorax) - Ten cases reported from continental United States July 17-23 as follows: Texas 4, Arizona 6. (Meadows). Total of 134 cases confirmed in portion of Barrier Zone in Republic of Mexico, Total of 1,041 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 108,827,400 as follows: Texas 81,305,400, New Mexico 5,382,000, Arizona 22,140,000. Total of 126,011,000 sterile flies released within Barrier of Mexico. (Williams, Smith).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Clarke, Conecuh, Dallas, Escambia, and Monroe Counties--adults heavy on soybeans, fed on leaves. Choctaw County--lighter. (Lemons).

### WEEDS

DALMATIAN TOADFLAX (Linaria dalmatica) - CALIFORNIA - New county record. Calaveras County--12 plants found along roadside near Railroad Flat, June 10, 1977, by D. Norfolk and K. Kerston. Determined by T. Fuller. (Hawkins).

### DETECTION

NEW COUNTY RECORDS

### DISEASES

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - TENNESSEE - Marshall, (p. 618).

### INSECTS

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - UTAH - Grand and San Juan. (p. 617).

A BRACONID WASP (Microctonus aethiopoides) - OHIO - Warren and Washington. (p.  $6\overline{23}$ ).

A EULOPHID WASP (Tetrastichus julis) - INDIANA - Whitley; PENNSYLVANIA - Fayette (p. 624).

AN ICHNEUMONID WASP (Diaparsis sp.) - INDIANA - Huntington; MARYLAND - Cecil. (p. 623).

A MOSQUITO (Aedes sollicitans) - OHIO - Stark. (p. 623).

MOURNINGCLOAK BUTTERFLY (Nymphalis antiopa) - WEST VIRGINIA - Lincoln. (p. 622).

NORTHERN CORN ROOTWORM (<u>Diabrotica</u> <u>longicornis</u>) - TENNESSEE - Madison. (p. 615).

A SPIDER MITE (<u>Tetranychus</u> <u>evansi</u>) - CALIFORNIA - Riverside. (p. 621).

TOMATO PINWORM (<u>Keiferia</u> <u>lycopersicella</u>) - OKLAHOMA - Stephens. (p. 621).

TULIPTREE APHID (Macrosiphum liriodendri) - CALIFORNIA - Marin. (p. 623).

WESTERN CORN ROOTWORM (<u>Diabrotica</u> <u>virgifera</u>) - ILLINOIS - Bond. (p. 615).

### WEEDS

DALMATIAN TOADFLAX (<u>Linaria dalmatica</u>) - CALIFORNIA - Calaveras. (p. 625).

### CORRECTIONS

CPPR 2(5):40 - Parlatoria blanchardi should be Parlatoria blanchardii.

CPPR 2(10):121 and 2(25):433 - OAT CROWN RUST (Puccinia coronata var. avenae) should be OAT CROWN RUST (Puccinia coronata).

CPPR 2(24):416 - FILAMENTOSA ROOT AND STEM ROT (Pellicularia filamentosa) should be PELLICULARIA ROOT AND STEM ROT.

CPPR 2(26):469 - A MYMARID WASP (Anaphes flavipes) - INDIANA - Whitely should be Whitley.

CPPR 2(26):470 - Amblyseius fallacis (a phytoseiid mite) ... should be ... Typhlodromus fallacis

CPPR 2(29):532 - PHYTOPHTHORA ROOT ROT (Phytophthora megasperma var. sojae) should be PHYTOPHTHORA ROOT AND STEM ROT.

CPPR 2(29):532 - STEM CANKER (Diaporthe phaseolorum var. caulivora) should be SOYBEAN STEM CANKER.

CPPR 2(29):537 - CHRYSANTHEMUM FOLIAR NEMATODE - ... (Werner et al.) should be (Wiener et al.).

CPPR 2(29):538 - TWOSPOTTED SPIDER MITE (Tetranychus urticae) - Change MISSOURI note to "Central area-1.5-25.5 (averaged 6.9) per leaf on delicious apple trees. (Munson)."

CPPR 2(30):573 - HYDRILLA (Hydrilla verticillata) - Riverdale County should be Riverside County.

CPPR 2(31):593 - SUNFLOWER MOTH (Homoeosoma electellum) Change line for Morton County to ... larvae heavy on heads. (Mock).

CPPR 2(31):600 - SCREWWORM - Last sentence - "Total of 150,812,000 ..." should be "Total of 150,812,800 ..."

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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti
Uredo rubescens Arth. a rust Det. F.G. Pollack	uredial	on leaves of Dorstenia cuttings	Costa Rica	Miami	MI
<pre>Brachycerus sp. a weevil Det. D.M. Odermatt</pre>	larval	in garlic from baggage	Italy	Kennedy Airport	NY
Ips cembrae (Heer) a bark beetle Det. D.M. Anderson	all	in pine dunnage in ship's holds	Netherlands	Cleveland	USA
Silba virescens (Macquart) a lonchaeid fly Det. G. Steyskal	larval	in figs from baggage	Italy	Philadelphia PA	в РА
Spodoptera litura (Fabricius) Egyptian cottonworm Det. R. Kunishi	adult	in quarters of military aircraft	West Pacific	Hawaii	USA
Trogoderma granarium Everts khapra beetle Det. W.D. McLellan	larval pupal	in dried flowers from cargo	India	New Orleans	AL
Otala vermiculata (Müller) a helicid snail Det. D.M. Odermatt	adult	in mail as food	Italy	Kennedy Airport	PA
Heterodera fici Kirjanova a nematode Det. W. Friedman	cyst	from soil with Ficus plant	Italy	Kennedy Airport	NY







## UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service Hyattsville, Maryland 20782

Hyattsville, Maryland 20782

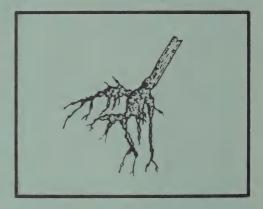
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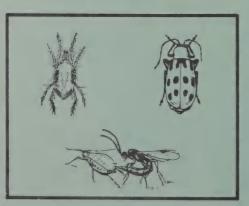
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VOL. 2 NO. 33

August 19, 1977

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# PLANT PEST REPORT





Animal
and Plant
Health
Inspection
Service
U.S.
DEPARTMENT

OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
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U.S. Department of Agriculture
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Hyattsville, Maryland 20782

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### **COOPERATIVE PLANT PEST REPORT**

### HIGHLIGHTS

### Current Conditions

CORN EARWORM, FALL ARMYWORM, and other noctuid larvae caused problems on many hosts in parts of many southern States. Peanuts needed treatment in Florida; another part of State will have heavy populations. Soybeans needed treatment in South Carolina, damage economic in blooming fields in North Carolina (p. 633), problem in early planted fields in Virginia (p. 634), treatment needed in Florida (p. 643). Milo heavily infested in South Carolina. (p. 633). FALL ARMYWORM infested almost all sorghum plants surveyed in Oklahoma. Heaviest populations in history of Mississippi. Corn and sorghum damaged in North Carolina. (p. 637). Damage heavier and more widespread than normal on corn in Kentucky. (p. 638). Damaged grasses in Mississippi, Georgia, and South Carolina. (p. 639). Controls on cotton difficult in Arkansas and South Carolina. (p. 645).

Delayed peak of GREENBUG may threaten new winter wheat plantings in South Dakota. (p. 634).

OAT STEM RUST most serious on oats in United States since 1950's. (p. 649).

Adults 100+ per light trap per night for CORN EARWORM in North Carolina, EUROPEAN CORN BORER in Kansas, FALL ARMYWORM and CABBAGE LOOPER (especially heavy) in Mississippi. (p. 654).

### Detection

New State records include BANKS GRASS MITE in Missouri (p. 639) and a WEEVIL in Kentucky (p. 653).

For new county and island records see page 653.

New host records for EUROPEAN ELM SCALE in Virginia (p. 647) and an APHELINID WASP in Hawaii (p. 652).

Reports in this issue are for the week ending August 12 unless otherwise indicated.

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### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

### INSECTS

CORN EARWORM (Heliothis zea) - ARKANSAS - Mississippi County-above treatment level in only one 40-acre field out of 8,000 acres of soybeans checked. (Barnes). OKLAHOMA - Haskell County-0-7 per row ft in soybeans. Averaged 3 per row ft in 3 fields; control recommended. (Arnold). KANSAS - Larval averages per sorghum head by county: Johnson-0.8, all larval instars on 50% of heads in milk stage in 1 field (Bell); Coffey--1 on 60% of heads in dough stage in 1 field, larvae 0.25-0.75 inch long (Hilbert). MISSOURI - Southeastern area--averaged 61 larvae per 3 ft of row, heavy, in 1 soybean field. Larvae fed on pods. (Roff). INDIANA - Southern districts--1 middle instar larva from 34 corn fields. (Meyer).

FLORIDA - Jackson County--corn earworm populations sporadic on soybeans, some fields needed treatment. Larvae of this species and FALL ARMYWORM (Spodoptera frugiperda) comparatively light on peanuts, but adults and eggs heavy. Larvae to be very heavy in near future. (Linker). Alachua and Levy Counties--both species heavy enough in 30% of 2,000 acres of peanuts to require treatment. (Baker).

SOUTH CAROLINA - Clarendon County--H. zea, YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli), and BEET ARMYWORM (S. exigua) completely defoliated about 8 acres of soybeans. Pee Dee area-these 3 species heavy in many soybean fields August 3, controls recommended. (Griffith). Saluda and Edgefield Counties--H. zea heavy on soybeans August 3, controls recommended. (Pollet).

Florence County--H. zea and FALL ARMYWORM (S. frugiperda) heavily damaged field of silage corn August 2, controls recommended. (Griffith). Newberry County--H. zea heavy on 60 acres of alfalfa week ending August 5, damage light. (Eason, Pollet). Statewide--H. zea, S. frugiperda, and S. exigua heavily infested and severely damaged milo in many areas. (Hays, Kissam). Oconee County--H. zea larvae 10-15 per ft of row, heavy, on 50-75 acres of millet. (Douglass). Lexington County--heavy on soybeans across the county, damage widespread. (Jones).

NORTH CAROLINA - Coastal Plain-H. zea larvae very heavy in many soybean fields blooming during late July and early August. Damage economic in fields just started blooming; larvae just above threshold of 20 per ft of row. Sampson, Edgecombe, Wilson, Johnston, Harnett, Brunswick, and Chatham Counties-5-25 larvae per ft of row in 5 to 40-acre soybean fields. (Hunt). Sampson, Bladen, Edgecombe, and Northampton Counties--mainly this species, up to 10 per ft of peanuts. (Hunt, Robertson).

VIRGINIA - Heliothis zea counts on soybeans by county: Lancaster—100+ acres infested, some at treatment levels, larvae 29 and 16 per 3 row ft from 2 separate fields. Richmond—damage occurred, populations heavy in some fields. Isle of Wight—in 6 of 8 fields, 2 fields previously treated on August 5. Southampton—earlier than expected on early planted beans. Severe drought dried corn; many second generation adults then laid eggs on soybeans instead of corn ears. Second generation larvae, normally on corn, damaged early planted soybeans in prebloom, bloom, and early pod—set stages. (Allen).

GREENBUG (Schizaphis graminum) - TEXAS - Percent parasitism of greenbug on sorghum by area August 4-5: Hale County--1-10, South Plains--5-40, south of Lubbock--40+. (Cronholm et al.). KANSAS - Kiowa, Comanche, Morton, Stevens, Haskell, Finney, and southern Butler Counties--greenbug increased on sorghum, some infestations economic, some treatments. (Shuman et al.). Morton, Stevens, Haskell, and Finney Counties--greenbug 50-2,500 per sorghum plant 24-inch to dough stage, heavier infestations in early planted fields; light parasitism showing up in most fields. (Shuman). SOUTH DAKOTA - Greenbug increased in all sorghum areas. Late peak (about 30 days later than in previous years) will seriously threaten new winter wheat plantings. (Walgenbach).

POTATO LEAFHOPPER (Empoasca fabae) - MICHIGAN - Branch County-up to 40 per 20 sweeps of alfalfa week ending August 5. (Stebbins).
OHIO - Counts (light due to recent rains) per sweep of alfalfa by
county: Ashtabula--2.8, Wayne--1.2, Geauga--1.3. Trumbull County-0.84 per sweep of 30-inch soybeans. (Drees). PENNSYLVANIA - Erie
County--increased and caused 4+% damage to leaves and clusters of
grapes. (Kim). NEW JERSEY - Adults and nymphs per 25 sweeps of
alfalfa by county: Monmouth--78 at Clarksburg and 86 at Allentown;
Burlington--121 at Columbus and 94 at Bordentown; and Trenton--88
at Yardville. (Vasvary).

TOBACCO BUDWORM (Heliothis virescens) - CALIFORNIA - Imperial County--reaching treatment levels (T5 larvae per 100 plants) in several 80-acre parcels of cotton at Calipatria. Level earlier than in previous years, normally peaks in October. (Flock).

TOBACCO HORNWORM (Manduca sexta) - NORTH CAROLINA - Bladen County-30% of 146 tobacco fields at threshold (10% of plants infested) with heaviest infestation at 30% of plants. Most frequent infestation level was 5% of plants. (Fields).

TOMATO HORNWORM (Manduca quinquemaculata) - NORTH CAROLINA - Granville County (Middle Belt)--4 of 36 tobacco fields reached threshold. Control excellent. (Baumhover).

### CORN, SORGHUM, SUGARCANE

### DISEASES

COMMON MAIZE RUST (<u>Puccinia sorghi</u>) - NEBRASKA - Adams, Phelps, Gosper, Dawson, Lincoln, Garden, Morrill, Scotts Bluff, and Box Butte Counties--prevalence in most fields 70-90%/severity trace to 1% in corn July 30 to August 5. Southeastern area--continued most prevalent corn disease. Current prevalence in most fields in

Lancaster, Otoe, Johnson, Nemaha, Richardson, Pawnee, Gage, and Saline Counties 80-95%/severity usually less than 1%. Severity 5% in 1 field in Johnson County. (Poe). KANSAS - Statewide--common maize rust most widespread corn disease. Ellis, Stafford, Reno, Harvey, and McPherson--prevalence 50-80%/severity generally light to moderate. (Sim). MISSOURI - Audrain County--prevalence in corn 50-75%/severity trace August 2 and 4. Ray, Carroll, Howard, Pike, Ralls, Monroe, and Saline Counties--trace amounts. (Foudin).

ILLINOIS - Ford, Iroquois, and Livingston Counties--common maize rust prevalence 3-35%/severity 1-4% in surveyed commercial corn fields July 18-22. Prevalence/severity in field corn by county week ending July 29: McLean--12%/trace, Macon--21% trace, Marshall--14%/trace, La Salle--17%/trace. For week ending August 5: Vermilion--11%/trace, Wayne--3%/trace, Saline--7%/trace, Williamson--2%/trace, Jefferson--9%/trace, Fayette--1%/trace, Shelby--4%/trace. (Jordan). OHIO - Statewide--widespread on corn in trace amounts in Ashland, Clark, Crawford, Delaware, Knox, Mahoning, Trumbull, and Vinton Counties July 25 to August 5. Severity limited to lower leaves in most cases. (Hite).

MINNESOTA - Blue Earth, Brown, Faribault, Scott, Steele, Waseca, and Watonwan Counties--common maize rust in all fields surveyed, prevalence 100%/severity less than 5% to nearly 25%. (Stromberg). MICHIGAN - Prevalence/severity in sweet corn by county July 30 to August 5: Berrien--5-10%/1%, tenth leaf fully emerged stage of variety Sweet Sue; Kalamazoo--5%/10% on first 2 lower leaves. (Singh).

COMMON SMUT (Ustilago maydis) - NEBRASKA - Adams, Phelps, Gosper, Dawson, Lincoln, Garden, Morrill, Scotts Bluff, and Box Butte Counties July 30 to August 5--prevalence 1-4% in most corn fields, 12% in severely hail-damaged fields in Box Butte County. Lancaster, Otoe, Johnson, Nemaha, Richardson, Pawnee, Gage, and Saline Counties--current prevalence trace to 5%, 20% in 1 field in Richardson County. (Poe). KANSAS - Stafford County--trace in 1 popcorn field. (Sim). MISSOURI - Ray, Audrain, Pike, Ralls, and Monroe Counties--trace amounts in corn August 2 and 4. (Foudin). MINNESOTA - Blue Earth, Brown, Faribault, Scott, Steele, Waseca, and Watonwan Counties--prevalence trace to 5% in most fields surveyed, almost 30% in several fields in Blue Earth and Waseca Counties. Tassels, stalks, and ears equally affected in all cases. (Stromberg).

ILLINOIS - Ford and Vermilion Counties--common smut prevalence 4-12% in commercial corn fields July 18-22. Prevalence/severity in field corn plants by county week ending July 29: McLean--12%/5%, Champaign-18%/5-10%, Marshall--6%/trace, La Salle--6%/trace to 3%. For week ending August 5: Vermilion-8%/5-15%, Clark--4%/trace, Crawford--9%/5-10%, Wayne--6%/2%, Saline--5%/trace, Williamson--7%/5%, Fayette--6%/5-10%, Shelby--14%/10-15%, Coles--5%/trace. (Jordan). OHIO - Prevalence less than 1% in every corn field surveyed except in Mercer (10%) and Perry (4%) Counties July 25 to August 5. (Hite).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Central and east-central areas--started to appear on corn in Marion, Miami, Franklin, Osage, and Anderson Counties; stress favored disease. East-central and southeastern areas--appeared on sorghum, some lodging in southeastern area. (Sim).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Crawford County--infected 70% of corn plants in field surveyed August 4, damage to leaf area 40%. (Jordan).

SOOTY STRIPE (Ramulispora sorghi) - KANSAS - Geary County-affected about 80% of sorghum plants in 1 field. (Sim).

CERCOSPORA LEAF SPOT (Cercospora sorghi) - ILLINOIS - Wayne County--infected 18% of corn plants surveyed August 4, tan spots on leaves, damage to leaf surface 5-15%. (Jordan).

STEWART'S WILT (Erwinia stewartii) - ILLINOIS - Prevalence/severity in field corn plants by county week ending July 29: Marshall--16%/5%. For week ending August 5: Clark--70%/25%, Crawford--4%/1%, Wayne--65%/15%, Williamson--45%/10%, Jefferson--6%/1%, Fayette--28%/15%, Shelby--3%/2%, Coles--5%/3%. (Jordan). MISSOURI - Prevalence/severity in corn by county August 2 and 4: Ralls--90%/trace to 5%; Pike--75%/trace to 5%; Monroe--45%/trace; Carroll, Howard, Audrain, Ray, Saline--trace/trace. (Foudin).

HOLCUS SPOT (Pseudomonas syringae) - MINNESOTA - Blue Earth, Brown, Faribault, Scott, Steele, Waseca, and Watonwan Counties--prevalence 100%/severity trace to 5% in all corn fields surveyed. Leaves on lower half of stalk generally only ones affected. (Stromberg).

MAIZE DWARF MOSAIC VIRUS - KANSAS - Ellsworth County--trace in 1 corn field. Doniphan County--trace in 1 field of 14-inch sorghum. (Sim). NEBRASKA - Morrill and Scotts Bluff Counties--prevalence 1-5% in corn July 30 to August 5, 60% in 1 late-planted field in Scotts Bluff County. (Poe). Southeastern area--currently absent or trace in most fields, prevalence 95% in 1 very late-planted field in Lancaster County. (Lane et al.). OHIO - Franklin and Ross Counties--prevalence less than 1% in 2 corn fields in vicinity of Johnsongrass infestations July 25 to August 5. (Hite).

MAIZE CHLOROTIC DWARF VIRUS - OHIO - Vinton County--trace amounts in 1 corn field July 25 to August 5. (Hite).

### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Southeastern area--unusually heavy second generation on corn. (Kilgore). Pottawatomie County--unusually heavy in 1 corn field, infested 100% of plants near Wamego. (Bell). Douglas County--in 80% of corn stalks (milk to dent) in 2 fields. (Hilbert). Johnson County--infested up to 30% of milk-stage sorghum plants in 1 field, no head breakage. (Bell). MISSOURI - Two Central Pest Management areas-second generation egg masses light in corn fields. Ranged 0-8 (averaged 3.7) and 0-12 (averaged 3.9) egg masses per 100 plants. Central area--adults heavy in blacklight trap. (Munson). WISCONSIN - Blacklight trap catches of adults continued very heavy at several sites and egg laying continued on susceptible sweet corn. Rainy weather prevented controls on sweet corn; significant numbers of

European corn borer larvae will show up in some fields. Dane County--in 10% of ears in some fields of sweet corn. Waushara County--3rd instars in 30% of tips in field of grain corn. Intensive controls applied on sweet corn as weather permitted. (Lovett).

INDIANA - Southwestern area--most European corn borer pupae recently pupated in corn fields. (Meyer). KENTUCKY - Hardin County--middle to late instar larvae infested 10-20% of corn ear tips in 4 early planted fields week ending August 5. Larval damage heavy to stalks in 1 field where nearly 50% of stalks showed tunneling below ear level. (Sloderbeck). DELAWARE - Sussex County--first and second instar infestations averaged 11% in untreated, sweet bell peppers in western area. Adults heavy in blacklight traps in most areas, averaged 20+ per night. (Burbutis, Kelsey).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - TEXAS - Counts on corn by county August 2: Crosby and Floyd-eggs and larvae on 30-50% of plants; Randall, Deaf Smith, and Dallam-infested 30-40% of some fields; Ochiltree and Moore-economic. (Patrick et al.). OKLAHOMA - Texas and Cimarron Counties-development from eggs to two-thirds grown larvae, infestations very light to 80-90% on corn. (Arnold). MISSOURI - New Madrid County-infested 50% of plants in 1 corn field at Portageville. (Barry).

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Sorghum whorls infested by county (1 field per county): Osage--5%, Douglas--2%, Johnson--24%, and Doniphan--2%. (Hilbert, Bell). OKLAHOMA - Washita and Caddo Counties--infestations almost averaged 100% on sorghum from 16 inch to preboot. (Arnold).

MISSISSIPPI - Statewide--severe fall armyworm problems week ending August 4. Heavy damage on corn, sorghum, millet, and pasture grasses. Up to 100 larvae per sq ft of millet. Controls successful. Statewide--currently still a problem on corn, sorghum, millet, and pasture grasses. Oktibbeha and Wilkinson Counties--up to 200 larvae per corn plant. Damage and control cost adding up to millions of dollars in State. (Anderson). Heaviest population in history of State. (Davis).

GEORGIA - Henry County--fall armyworm severely damaged sweet corn week ending August 6. (Dupree). SOUTH CAROLINA - Saluda County--heavy on milo week ending August 5, controls recommended. (Pollet). NORTH CAROLINA - Piedmont and Mountains--damage continued, 50 fields exceeded 50% of plants infested. Larvae averaged 3 per plant on 10-20 acres of late corn and sorghum. Controls moderate when infestations deep in whorl. Damage in Chatham, Lincoln, Polk, Alamance, Graham, Swain, Granville, McDowell, Forsyth, Yancey, and Lee Counties. (Cobb et al.).

KENTUCKY - Adair County--fall armyworm larvae heavily damaged late-planted 20-acre corn field week ending August 5. Field previously treated; nearly 90% of plants infested due to unfavorable weather and late hatching larvae. Larvae (mostly middle instars, but all stages present) ranged 1-10 per infested stalk. Retreatment of field recommended. Other fields in area infested. (Sloderbeck). Scott County--larvae infested 90% of corn in late-planted 6-acre field. (Gregory).

KENTUCKY - Current fall armyworm larval damage much heavier and more widespread than normal. Ad ir, Laurel, Grant, Todd, Oldham, Shelby, Livingston, Hardin, Rowan, and McLean Counties--heavy on late-planted corn. Livingston County--larvae infested nearly 100% of plants and averaged 2.7 per plant in 28-acre field and 4.7 per plant in 45-acre field. Damaged developing tassels on corn in late whorl in several other fields. Larvae first observed in these fields July 14, fields treated twice beginning when 50% of plants infested with larvae. Retreatment not recommended since most larvae nearly full grown. Larvae damaged 10-15% of ears in 200 acres of white corn at another location in this county. Fayette County--larvae damaged sweet corn ears in 0.25-acre planting. (Sloderbeck).

INDIANA - Southern districts--middle instar to nearly full-grown fall armyworm larvae collected from 3 of 34 corn fields; infestation ranged 4-36%. (Meyer). WEST VIRGINIA - Putnam County--larval damage heavy to 5 acres of sweet corn, 80% of plants damaged. (Hacker).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - KANSAS - New county record. Hamilton County--collected from corn near Syracuse by M.L. Shuman, July 19, 1977. Determined by M.L. Shuman. (Bell).

CORN ROOTWORMS (Diabrotica spp.) - UTAH - Cache County--WESTERN CORN ROOTWORM (D. virgifera) destroyed 20 acres of corn, mostly field corn, but some sweet corn, east of Newton. All silks eaten, leaves damaged and 50-100 adults per stalk. Most severe damage this season. (Karren). TEXAS - New D. virgifera county record. Victoria County--5 miles south of Inez, collected by C.P. Fehlis, May 31, 1977. Determined by J.A. Jackman. Adults feeding on corn silks and found on ground, 75% yield loss in 80-acre corn field with 80% of corn lodged due to root damage. (Jackman).

INDIANA - New D. virgifera county record. Dubois County--adult collected within city limits of Ferdinand from grain corn by R. Meyer, August 9, 1977. Determined by R. Meyer; verified by G. VanWoerkom. Tippecanoe County--male to female catch in 10 sticky traps August 4: D. virgifera 1,010:337 and NORTHERN CORN ROOTWORM (D. longicornis) 2,041:448. (Meyer). OHIO - Northeastern area-heavy rains decreased Diabrotica spp. populations feeding on corn silk. Counts per ear by county: Richland--4.0; Wayne--4.6; Ashtabula, Medina, and Trumbull--fewer than 2.0 (Drees).

MINNESOTA - Diabrotica spp. adult surveys completed in all 6 districts (5 fields chosen at random per county). Adults per acre/ratio of D. longicornis to D. virgifera by district: West-central-25,257/73:27, east-central-4,459/80:20, southwest-36,392/97:5, and southeastern-51,650/90:10. (Sreenivasam). WISCONSIN - Eastern Counties--Diabrotica spp. heavy. Walworth, Racine, Kenosha, Jefferson, Ozaukee, Washington, Dodge, Fond du Lac, Sheboygan, and Winnebago Counties--averaged 4+ adults per plant, 18 per plant in 1 Walworth County field. Many females full of eggs. Egg laying should peak in 7-14 days. (Lovett). MICHIGAN - Central area--D. longicornis and D. virgifera adult emergence still heavy week ending August 5. Sanilac County--up to 300 adults per 160 corn plants. (Van Sickle, Brenner).

CONCHUELA (Chlorochroa ligata) - TEXAS - Counts per sorghum head by county July 29 to August 1: Jones, Knox, Haskell, Baylor--up to 20 in parts of some fields; Jones and Fisher--up to 100 on hard dough stage. (Boring, Finley).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Comanche County-up to 40 per sorghum head August 5. (Moore).

BANKS GRASS MITE (Oligonychus pratensis) - MISSOURI - New State Record. Buchanan County--collected on corn at Rushville, by E. Turner, August 3, 1977. Determined by W.R. Enns. (Munson).

### SMALL GRAINS

Small grain harvest July 29 to August 9 in the northern United States in final stages. Temperature and precipitation past 14 days near normal in most areas and crop harvest progressing 7-14 days ahead of normal. (Roelfs, Long).

### DISEASES

OAT CROWN RUST (Puccinia coronata) - WISCONSIN - Douglas County-prevalence  $100\%/\overline{\text{severity}}$  5-10% in oat field in milk stage. (Lovett).

### TURF, PASTURES, RANGELAND

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Amite, Stone, Pike, Clay, Walthall, Prentiss, George, and Calhoun Counties-- heavy, up to 100% defoliation common on untreated Bermudagrass pastures. (Anderson). GEORGIA - Statewide--controls underway for damaging infestations in grasses week ending August 6, population expected to increase next 14-21 days (Suber); Pike County-- heavily damaged coastal Bermudagrass pastures (Dupree). SOUTH CAROLINA - Oconee County--infestations heavy and damaging to golf course August 4, controls recommended. (Pollet). Statewide--this species and BEET ARMYWORM (S. exigua) caused many heavy infestations in fescue and Coastal Bermudagrass. Cutting or chemical treatment needed. (Douglass et al.).

SOUTHERN CHINCH BUG (Blissus insularis) - TEXAS - New county record. El Paso County--collected at El Paso by A. Woods, July 23, 1977. Determined by M.H. Sweet. Heavy in spots of established lawn. (Jackman).

GRASSHOPPERS - MISSOURI - Texas, Howell, and Oregon Counties--mainly Melanoplus femurrubrum, ranged 27-50+ per sq yd in fescue and mixed pastures. Damage very severe in low rainfall areas. Chemical controls applied to pastures in these areas. (Munson).

### FORAGE LEGUMES

### DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Central areamost prevalent alfalfa disease, incidence and severity much less than in eastern one-third of State. Prevalence by county: Dickinson and Rooks--5%, Barton--trace, Reno--100%. (Sim).

BACTERIAL LEAF SPOT OF ALFALFA (Xanthomonas alfalfae) - KANSAS - Saline and Barton Counties--trace in single alfalfa fields. (Sim).

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - SOUTH CAROLINA - Greenwood County--"hundreds" of larvae of this species and BEET ARMYWORM (S. exigua) per 25 sweeps on 25 acres of alfalfa. Acreage immediately cut. (Douglass).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Fresno County-lst through 4th instar larvae heavy on alfalfa at Clovis, treatment required. (Dunnegan).

GARDEN WEBWORM (Loxostege rantalis) - KANSAS - Southeastern area-heavy in some alfalfa fields. Franklin County-severely defoliated 1 field of 8-inch alfalfa. (Kilgore). Franklin, Coffey, Osage, and Johnson Counties--infested 90-100% of terminals in some alfalfa fields 20-inch to bloom. (Salsbury).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - INDIANA - Jackson County--adults almost 9 per sweep in alfalfa field. (Sutton).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OREGON - New county record. Crook County--alates on roadside plants of Melilotus alba (white sweetclover) near east Prineville July 13, 1977. Collected and determined by R.L. Penrose. (Penrose).

GRASSHOPPERS - MINNESOTA - Adults on alfalfa still mostly below economic levels. Infestations widespread and not concentrated in alfalfa as in previous years, "hotspots" difficult to designate. Most common species included Melanoplus femurrubrum, M. bivittatus, and M. differentialis. Becker, Clay (8-10 in 2 fields), Kittson (8-13 in 2 fields in western edge), Marshall (8-9 in 2 fields in western edge), Polk (8-9 in 3 fields), Big Stone, Chippewa (8-9 in 3 fields and adjacent corn and soybeans damaged primarily by M. differentialis), Douglas, Grant, Lac Qui Parle, Otter Tail, Pope, Stevens, Swift, Traverse, Wilkin (8-10 in 2 fields), Yellow Medicine, Cottonwood (6 in 1 field), Jackson, Lincoln, Lyon, Redwood, Brown, Martin, Watonwan, Anoka, Chisago, Isanti, and Washington Counties--averaged 7 or less per sq yd (with few economic counts). (Sreen page)

### SOYBEANS

### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - ILLINOIS - Prevalence in soybeans by county July 18-22: Ford-24% in commercial field; Livingston and Vermilion-80-90% in commercial fields. Fayette County--prevalence in 14 soybean varieties in monitoring plots at Brownstown: Hodgson, 37.0%; Amsoy, 30.7%; Amsoy 71, 30.7%; Corsoy, 45.3%; Wells, 53.7%; Woodworth, 45.3%; Williams, 30.7%; L 740-611, 18.0%; Cutler, 45.3%; Kent, 62.0%; L-21, 30.7%; Clark L1, 45.3%; Clark 63, 45.3%; L 716-436B, 30.7%. (Jordan, Lim). Prevalence/severity in surveyed soybeans by county week ending July 29: McLean-45%/14%, Champaign-95%/20%, Macon-85%/18%, Marshall-90% 18%, La Salle-40%/12%. For week ending August 5: Vermilion-18%/8%, Clark-3%/1%, Wayne-21%/8%, Saline-45%/15%, Williamson-17%/8%, Jefferson-55%/12%, Fayette-48%/12%, Shelby-95%/20%, Coles--12%/4%. (Jordan).

OHIO - Statewide--soybean brown spot prevalence 100% in all soybean fields surveyed July 25 to August 5. Limited to lowermost leaves on lower one-third of plants. (Hite). MICHIGAN - Prevalence/severity in soybeans by county July 30 to August 5: Berrien--1-2%/trace in full bloom stage; Van Buren--2-4%/trace in beginning bloom stage; Kalamazoo--few scattered plants/trace. (Singh).

PHYLLOSTICTA LEAF SPOT (Phyllosticta sojaecola) - ILLINOIS - Iroquois, Livingston, and Ford Counties--prevalence 1-3% of soybeans in fields surveyed July 18-22. Prevalence/severity in soybean fields surveyed by county week ending July 29: McLean--8%/trace, Champaign--10%/trace, Macon--7%/trace, Marshall--5%/trace, La Salle--9%/trace. For week ending August 5: Vermilion--2%/trace, Crawford--3%/trace, Fayette--12%/not given, Shelby--11%/trace, Coles--3%/trace. (Jordan).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - MISSOURI - Prevalence/severity in soybeans by county August 2 and 4: Boone and Ralls--100%/trace to 5%, Pike--trace amounts. (Foudin). ILLINOIS - Prevalence/severity in surveyed soybean fields by county week ending July 29: McLean--8%/3%, Champaign--65%/15%. For week ending August 5: Vermilion--15%/3%, Clark--95%/18%, Crawford--95%/18%, Wayne--48%/10%, Saline--85%/15%, Williamson--78%/11%, Jefferson--14%/4%, Fayette--64%/9%, Shelby--85%/12%, Coles--18%/4%. (Jordan). OHIO - Ashland, Clark, Clinton, Crawford, Delaware, Logan, Ross, and Vinton Counties--prevalence 90-100% in most fields, lesions on all leaves, no defoliation July 25 to August 5. (Hite).

PHYTOPHTHORA ROOT AND STEM ROT (Phytophthora megasperma var. sojae) - ILLINOIS - Macon County--on scattered plants in 1 soybean field July 28 to August 5. Causal organism isolated and identified from infected stem tissue. (Jordan). OHIO - Most northwestern and north-central counties--prevalence trace to 50%, soybean plants dead or dying July 25 to August 5. (Hite). MICHIGAN - Berrien County--prevalence 3-5% in scattered soybean plants (Amsoy 71) at low spots in field in full bloom July 30 to August 5. (Singh).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - ILLINOIS - Macon, Clark, Shelby, and Coles Counties--on pods and stems of scattered plants in soybean fields week ending August 5. Wayne County--infections on leaves. (Jordan). MICHIGAN - Berrien County--trace in 1 soybean field July 30 to August 5. (Singh).

TENUISSIMA LEAF SPOT (Alternaria tenuissima) - MISSOURI - Monroe County--trace in soybeans August 2 and 4. (Foudin).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - ILLINOIS - Coles and Shelby Counties--affected scattered plants in 2 soybean fields week ending August 5. Irregular brown areas on stem and pods. Microscopic examination revealed acervuli with conidiophores, conidia, and setae typical of C. dematium var. truncata. (Jordan).

 $\begin{array}{lll} \textbf{CHARCOAL ROT (} \underline{\textbf{Macrophomina}} & \underline{\textbf{phaseolina}}) & - & \underline{\textbf{KANSAS}} & - & \underline{\textbf{East-central}} \\ \underline{\textbf{area--appeared on soybeans}} & \underline{\textbf{in Osage County. (Sim).}} \end{array}$ 

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS -Stafford County--affected 100% of soybean plants in irrigated field. Some leaf shredding. (Sim). MISSOURI - Prevalence in soybean plants by county August 2 and 4: Boone and Audrain--75% (severity trace), Carroll--10%, Ray, Howard, and Monroe--trace. (Foudin). NEBRASKA - Lancaster, Otoe, Johnson, Nemaha, Richardson, Pawnee, Gage, Jefferson, and Saline Counties--prevalence in most soybean fields 30-70%/severity trace to 10%. (Poe). MINNESOTA -Brown, Blue Earth, and Steele Counties--prevalence 100% in all soybean fields surveyed/severity 5-10%. (Stromberg). ILLINOIS -Iroquois County--prevalence 34%/severity 15-20% in soybean field July 18-22. Prevalence severity in soybean fields surveyed by county week ending July 29: Marshall--55%/8%, La Salle--45% 12%. For week ending August 5: Vermilion--22%/8%, Coles--3%/1%. (Jordan). OHIO - Most fields in northeastern, north-central, and northwestern counties--trace to 100% prevalence/more severe on lower leaves with scattered lesions on upper leaves July 25 to August 5. Crawford, Delaware, and Mahoning Counties--severities neared 30% in 3 fields. (Hite).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - MISSOURI - Prevalence severity in soybean plants by county August 2 and 4: Carroll--100% 1-5%, Boone and Audrain--50%/trace to 3%, Ray--trace amounts. (Foudin).

BEAN YELLOW MOSAIC VIRUS - OHIO - Ashland, Darke, Franklin, and Preble Counties--infected scattered soybean plants July 25 to August 5. (Hite).

SOYBEAN MOSAIC VIRUS - OHIO - Ashland and Mahoning Counties--trace on soybeans July 25 to August 5. (Hite).

TOBACCO RINGSPOT VIRUS - OHIO - Clark, Henry, and Wood Counties--occasional infected soybean plant July 25 to August 5. (Hite).

### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Haskell, Wagoner, Muskogee, Sequoyah, and Le Flore Counties -- up to 10 per row ft in some soybean fields. Mostly 1st and 2nd instars. Some fields to be treated. (Arnold). ILLINOIS - Central and northern areas-larvae fewer than 4 per ft of row in soybeans. Up to 10 per ft of row with 10% or more defoliation in occasional fields. Some diseased and/or parasitized larvae. (Black). KENTUCKY - Hardin and Nelson Counties -- larvae increased week ending August 5. Ranged 5.6-19.8 (averaged 10.6) per 10 sweeps in 4 fields, mostly early instars. Feeding damage averaged 5% or less. Currently, larvae continued increase. Graves County--ranged 7.5-9.9 per ft of row (30.6-54.4 per 10 sweeps) in 3 fields. Caldwell County--4.3-11.6 per ft of row (9.0-56.8 per 10 sweeps) in 3 fields. (Sloderbeck). Christian County--treatment recommended in field where larvae averaged 20 per ft of row and defoliation about 15-20%. (Raney). Most larvae 0.5 inch or shorter. (Sloderbeck). INDIANA - Southern districts -- larvae, mostly early instars, in most soybean fields; heaviest count averaged about 9 per vd of row in beans with pods 0.75 inch at top. (Meyer).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - Pearl River County--larvae averaged 10 per 25 sweeps on 60 acres of blooming soybeans; 1,500 acres treated for this species, GREEN CLOVERWORM (Plathypena scabra), SOYBEAN LOOPER (Pseudoplusia includens), CABBAGE LOOPER (Trichoplusia ni), and BEAN LEAF BEETLE (Cerotoma trifurcata). (Lambert). FLORIDA - Columbia, Levy, and Alachua Counties--A. gemmatalis larvae on older soybean plants averaged less than 1 per row ft in surveyed fields. (Baker). Gadsden County--adults averaged 5-7 per night in 1 blacklight trap at Quincy August 5-11. (Herzog).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - Alachua and Levy Counties--treatment needed on 20% of 3,000 acres of soybeans. (Baker).

BEET ARMYWORM (Spodoptera exigua) - SOUTH CAROLINA - Chester County--heavily infested 30-40 acres of soybeans, controls successful. Treatment needed on 30 more acres. (King, Kissam).

CABBAGE LOOPER (Trichoplusia ni) - MISSISSIPPI - Oktibbeha County--larvae of this species and SOYBEAN LOOPER (Pseudoplusia includens) averaged 1 per row ft on 800 acres of blooming soybeans. (Rose).

### COTTON

### INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Blacklands, north-central area, and Rolling Plains--generally light on cotton July 22 to August 1. (Jackman). Counts on cotton by county August 4-5: Ellis and Navarro--2-27% punctured squares; Collin and Hunt--up to 30% punctured squares, 4% punctured squares in most fields; Fisher and Jones--less than 10% punctured squares in 85% of fields, 11-41% punctured squares in 15% of fields; Kent--66% punctured squares in 1 field; Howard--0-55% (mean 7%) damaged squares, infested 14 of 69 fields; Glasscock--infested 11 of 98 fields in St. Lawrence area. (Moore et al.). OKLAHOMA - Pheromone trap counts (and number of traps) by county: Kiowa--9 (37), Jackson--7 (16), Greer--3 (4), and Harmon 0 (24). Punctured squares up to 35% (averaged 5%). (Arnold).

MISSISSIPPI - Central and southern areas—boll weevil increased week ending August 4. Some fields treated. Punctured squares by county: Leake—15% on 1,200 acres, Montgomery—0-12% on 2,500 (6 fields treated), Lowndes—1% on 500, Madison—5% on 2,500, Newton—12% on 90, Adams—8% on 2,000, Copiah—2% on 1,100, Franklin—14% on 300, Holmes—10% on 500, Calhoun—3.5% on 6,000, Itawamba—1% on 1,500, and Lafayette—1% on 2,000. Current punctured squares by county: Jasper—30% on 200 acres, Franklin—10% on 300, Calhoun—5% on 6,000, Lee—5% on 800, Prentiss—1% on 600, Madison—5% on 2,500, and Webster—0.1% on 300. (Anderson). TENNESSEE—Central area—punctured cotton squares still 2-3%. (Cagle). Western area—punctured squares increased (ranged 3-16%) in rank cotton. First generation "hatchout" expected week ending August 19. (Locke).

BOLLWORMS (Heliothis spp.) - NEW MEXICO - Pecos Valley--BOLLWORM (H. zea) infested bolls on 10-20% of cotton plants week ending August 5. (Nielsen). TEXAS - Bollworm and TOBACCO BUDWORM (H. virescens) eggs generally light on cotton but highly variable July 26 to August 1. Hidalgo, Ellis, and Navarro Counties -- about 100 eggs per 100 terminals in some fields. Trans-Pecos area--eggs, larvae, and damaged squares generally light. (Jackman). H. zea and H. virescens on cotton by county August 4-5: Ellis and Navarro--0-18% eggs, 0-7% larvae; Collin and Hunt--1-2 larvae per 100 plants; Fisher and Jones--less than 5% damaged squares and 2-30 larvae per 100 plants in most fields, up to 30% damaged squares, 0-5 eggs per 100 plants, and 98 bollworms to 2 budworms; Castro and Lamb--2-6 eggs per 100 plants; Martin--0-8 eggs (mean of 2 eggs) and less than 1 larva per 100 terminals, 0-15% (mean 3%) damaged squares; Glasscock--0-14 eggs (mean 5) and 0-5 larvae (mean 3) per 100 terminals, 0-17% (mean 8%) damaged squares in St. Lawrence area; Howard--0-29 (mean 2) eggs per 100 terminals and 0-13% (mean 4%) damaged squares; El Paso Valley--less than 10% eggs, and 4 bollworm to 1 budworm; Pecos and Reeyes--0-6 eggs per 100 terminals; El Paso--0-8 eggs and 0-4 larvae per 100 terminals, 1-12% damaged squares; Culberson--0-5 eggs and 0-3 larvae per 100 terminals, 0-6% damaged squares; Hudspeth--0-8 eggs and 0-10 larvae per 100 terminals, 0-14% damaged squares at Dell City. (Finley et al.).

LOUISIANA - Upper Red River Valley-bollworm adults increased to 30 and 35 per light trap August 1-3. All but 1 adult each night were H. zea; more H. virescens adults in fields than light trap catches indicate. (Tynes). OKLAHOMA - Caddo County-bollworm larvae up to 15 per 100 cotton terminals in previously treated fields and up to 6 per 100 terminals in untreated fields. Damaged squares up to 70% in previously treated fields and up to 15% in untreated fields. Most fields still lightly infested. Harmon County-damaged squares up to 30%, averaged 5%. Tillman County-larvae averaged 6,800 per acre and damaged squares ranged 10-17% at Tipton; larvae 34 H. zea and 1 H. virescens at Tipton. Grady County-larvae 10 H. zea and 1 H. virescens at Chickasha. (Arnold). ARKANSAS - Desha County-larval determinations indicate H. virescens dominant, H. virescens to H. zea 38:2 and 55:20 in 2 samples. Chicot County-Heliothis eggs up to 50 per 14 row ft, larvae 5-42 per 56 row ft. Desha County--eggs up to 111 per 56 row ft. (Wall).

MISSISSIPPI - Statewide-Heliothis spp. increased, many fields received first larval treatment week ending August 4. Larvae in Delta counties: Sharkey--6% (7-25% eggs) on 1,000 acres, Sunflower--3% on 200, and Carroll--less than 1% on 1,500. Larvae in northern counties: Yalobusha--0.03% on 5,000 acres, Prentiss--7% on 600, Monroe--4% on 5,000, Pontotoc--2% on 100, Lafayette--2% on 2,000, Itawamba--10% on 1,500, and Calhoun--3% on 6,000. Larvae in central and southern counties: Lincoln--20% on 600 acres, Copiah--8% on 1,100, Adams--8% on 2,000, Newton--8% eggs on 90, Madison--12% on 2,500, Lowndes--2% on 500, Montgomery--2% on 2,500, Leake--3% on 1,200, Holmes--12% on 500, and Hinds--10% on 800. Statewide--currently eggs continued increase. Majority of cotton on treatment schedule; problems beginning due to lack of adequate control. Larvae (and eggs) by county: Quitman--10% (10-100%) on 2,000 acres, Sharkey--6% (2-60%) on 1,000, Jasper--50% on 200, Franklin--5% on 300, Calhoun 7% on 6,000, all acres treated, Lee--10% on 800, Prentiss--8% on 600, Madison--10% on 2,500, and Webster--6% on 300. (Anderson).

TENNESSEE - Central area--Heliothis sp. larvae generally 4-5 per 100 cotton terminals, 23+ in 1 field. (Cagle). Western area--larvae 1-15 per 100 terminals in early cotton; 2nd, 3rd, and 4th instars in all fields, few eggs. Eggs and/or larvae 1-22 per 100 terminals in rank cotton. Egg laying continued in rank cotton, population increases expected. (Miller et al.). Controls needed for larvae in late rank fields. (Gordon, White). GEORGIA - Statewide--Heliothis spp. egg laying heavy. Sugar line survey August 1 showed 94 H. virescens and 209 H. zea adults. H. virescens pheromone trap catches by county: Dooly--2, Turner--2, and Crisp--1. (Emery, Lambert).

SOUTH CAROLINA - Pee Dee area--H. <u>zea</u> eggs generally averaged 50-150 per 100 plants in various cotton fields August 3. (Griffith, Dunbar). York County--heavy H. <u>zea</u> infestations (80-90%) extensively damaged 200+ acres of late cotton by August 2. York and Chester Counties--up to 50 larvae per 100 cotton plants, heavy, on 450 acres, mostly 1st and 2nd instars, many eggs present, controls applied. Anderson County--about 100 acres of cotton virtually destroyed in spite of several control attempts; 1st through 3rd instars infested 20-25% of 30 cotton acres, control recommended. Greenwood County--1st and 2nd instar larvae 20-30 per 100 plants on 40 acres of cotton, controls applied. (Douglass).

NORTH CAROLINA - Many areas--H. <u>zea</u> under control with conventional insecticides, especially in drier fields. Damaged 50% of squares and 20% of medium to large bolls in few scattered fields. (Hunt).

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Mississippi County--fed on both small and large cotton bolls. Combined counts for S. frugiperda and BOLLWORM (Heliothis zea) indicated about 10% of fields at treatment level. Fall armyworm more difficult to control on cotton than on pastures. (Barnes). MISSISSIPPI - Statewide--fall armyworm larvae on cotton in many areas week ending August 4. Feeding in terminals and blooms. Some treatment applied. Currently--larvae caused problems in many areas in cotton; fed on "candle" squares, blooms, and bottoms of large bolls. Acres treated by county: Winston--1,500, Noxubee--800, and Quitman--600. Grassy fields most heavily infested. (Anderson).

BEET ARMYWORM (Spodoptera exigua) - OKLAHOMA - Harmon County-infested up to 7% of cotton plants. (Arnold). SOUTH CAROLINA - Dillon, Marion, Sumter, and Florence Counties--15-40 larvae per 100 cotton plants August 3. (Griffith). Marlboro County--20-30 larvae per 100 cotton plants, controls not effective. (Dunbar). Greenwood County--currently, 1st through 3rd instar larvae 10 per 100 cotton plants (moderate) on 40 acres, controls applied. (Douglass).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Caddo County--heavy in scattered, previously treated cotton fields. (Arnold).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - Delta counties--heavy in spots in cotton week ending August 5. Sunflower County--80% in 1 field, moderate loss of squares; control applied. (Mitchell).

CONCHUELA (Chlorochroa ligata) - TEXAS - Gaines County--up to 10 per cotton plant, 75% young boll loss August 5. (Leser, Morrison).

### TOBACCO

### INSECTS

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Trousdale, Sumner, Smith, and Macon Counties -- larvae 0-500 per acre (above control level) in 4 of 9 tobacco fields. (Gregory).

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Trousdale, Sumner, Smith, and Macon Counties--larvae 0-400 per acre (above control level) in 2 of 9 tobacco fields. (Gregory).

### MISCELLANEOUS FIELD CROPS

### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - South Plains area--economic in many blooming sunflower fields August 6. (Leser, Morrison). SOUTH DAKOTA - Still heavy in most sunflower areas. Southeastern area--all larval instars up to 990 per head in untreated plots, 400-500 larvae common in many heads. (Walgenbach).

### POTATOES, TOMATOES, PEPPERS

### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - OHIO - Wayne County-various size larvae infested about 20% of potato plants in 500-acre commercial field. (Drees).

### BEANS AND PEAS

### DISEASES

PHASEOLI BEAN BLIGHT (Xanthomonas phaseoli) - NEBRASKA - Scotts Bluff, Morrill, and Box Butte Counties--in many fields of field beans July 30 to August 5, usually in isolated spots totaling 15-35% of total field. Infected nearly 100% of plants in 1 field in Box Butte County. (Poe, Kerr).

### **DECIDUOUS FRUITS AND NUTS**

### INSECTS

CODLING MOTH (<u>Laspeyresia pomonella</u>) - WASHINGTON - Spokane County--first major buildup of second generation adults heavy in most traps throughout Green Bluff area. (Bosley, Retan). IDAHO - Canyon County--l adult in pheromone trap from July 21 to August 1 at Twin Falls. (Stoltz).

ZIMMERMAN PINE MOTH (<u>Dioryctria</u> <u>zimmermani</u>) - WISCONSIN - New county record. Jefferson County--larvae infested Norway pine, Douglas-fir, and Scotch pine at Waterloo. Larvae collected from Norway spruce, June 21, 1977, by H.J. Hauser; on Douglas-fir, June 22, by S.B. Ferguson; and on Scotch pine, June 21, by S.B. Ferguson. All determined by D.W. Weisman. (Lovett).

EUROPEAN RED MITE (Panonychus ulmi) - MISSOURI - Wright County-7-58 (averaged 25.4) per leaf on Red Delicious apples in 1 orchard at Mountain Grove. (Enns).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSOURI - Wright County--ranged 35-192 (averaged 80) per leaf on Red Delicious apples in 1 orchard at Mountain Grove. Controls applied. Central area--counts fewer than 1 per leaf in 2 orchards. (Enns).

PECAN WEEVIL (<u>Curculio</u> <u>caryae</u>) - MISSISSIPPI - Wilkinson County-first adults of season <u>captured</u> in cone traps week ending August 4. (Dale). GEORGIA - Sumter County-409 in 120 cone cage traps week ending August 6. (Harper, Ellis).

WALNUT HUSK FLY (Rhagoletis completa) - OREGON - Yamhill County-emergence heavier than usual in 1 commercial walnut orchard in Dundee area. Average per trap by date: August 9--12.3, August 10--43.1, and August 11 (after treatment)--8. (Larson).

EUROPEAN ELM SCALE (<u>Gossyparia</u> <u>spuria</u>) - VIRGINIA - New host record for State. Adult females and first instars collected from pear tree in City of Arlington by C.F. Lay, July 11, 1977. Specimens identified by R.G. Baer. (Allen).

### **SMALL FRUITS**

### INSECTS

A LEAFHOPPER (<u>Erythroneura elegantula</u>) - PENNSYLVANIA - Erie County--increased damage detected at several locations, with damage averaging about 5% over 17 locations. (Kim).

### FOREST AND SHADE TREES

### INSECTS

FALL WEBWORM (<u>Hyphantria cunea</u>) - OREGON - Marion County-populations increased significantly in residential tree plantings
at Salem. Heavy tent concentrations on black walnut trees in
northeast area of city. Other hosts include dooryard apples, maples,
and lilacs. (Penrose).

LOCUST LEAFMINER (Odontota dorsalis) - OHIO - Lake County-severe skeletonization of locust trees in isolated and restricted northern location not more than 5 miles along Interstate Highway 90, just east of Madison. (Drees). Similar damage in same area past several years. (Purrington).

### MAN AND ANIMALS

### DISEASES

ROCKY MOUNTAIN SPOTTED FEVER (<u>Rickettsia rickettsi</u>) - OHIO - Brown, Franklin, Fulton, Hamilton, Hancock, and Lucas Counties-12 cases confirmed. (Parsons).

### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - TEXAS - Counts per head on cattle by county August 3 and 5: Nueces and Calhoun-200+, McCulloch-300 per untreated side, Sterling-200 per side; Presidio, Brewster, Winkler, Upton, Ward, Terrell, and Pecos-300-1,000 per head. (Neeb et al.). OKLAHOMA - Osage County-800-1,000 per head on cattle. (Arnold). INDIANA - Grant County-averaged 34 per side on 15 mixed cattle. (Williams).

FACE FLY (Musca autumnalis) - OKLAHOMA - Osage County--averaged 2 per face on cattle. (Arnold). MISSISSIPPI - Statewide--continued light. Oktibbeha, Lowndes, Clay, Monroe, Chickasaw, and Calhoun Counties--fewer than 4 per face on cattle. (Anderson). INDIANA - Grant County--averaged 7 per face on 15 mixed cattle. (Williams).

MOSQUITOES - MINNESOTA - Metropolitan Mosquito Control District reported over 50% decrease in light trap counts for Aedes vexans. Culex tarsalis also decreased from previous week. C. tarsalis not breeding as heavily as expected. Among larval collections, C. tarsalis (known vector of WESTERN EQUINE ENCEPHELOMYELITIS (WEE)) 40% of total mosquito catch as compared with 22% last week. Aedes vexans rated second. Daytime bite collections continue to rate A. vexans as number one, followed by A. triseriatus (known vector of CALIFORNIA ENCEPHALOMYELITIS (CE)). One confirmed case of CE in 5-year-old from Le Sueur. Additional clinical cases of WEE in horses by county: Kanabec-2, Marshall--1, Norman--1, Olmsted--1, Pine--1, Pope--1, St. Louis--1, Traverse--1, and Wabasha--1 (died). Total of 40 clinical cases as of August 11. (Sreenivasam). OHIO - Tuscarawas County--up to 1,900 Aedes trivittatus taken in CDC minature light traps per night. Population same throughout much of State. (Parsons).

EAR TICK (Otobius megnini) - TEXAS - Counts per ear by county August 3 and 5: De Witt-135 adults and nymphs on untreated animals; Ward--5-45 on cattle. (Neeb et al.).

### BENEFICIAL ORGANISMS & THEIR ENEMIES

### INSECTS

AN ICHNEUMONID WASP (Diaparsis sp.) - INDIANA - New county record. Franklin County-parasitized 0.8% of Oulema melanopus (cereal leaf beetle) larvae on oats in Springfield Township May 12, 1977. Collected by B. Sproat. Determined by P. DeWitt. (T.L. Burger).

AN ICHNEUMONID WASP (Lemophagus curtus) - INDIANA - New county record. Franklin County-parasitized 0.05% of Oulema melanopus (cereal leaf beetle) larvae on oats in Springfield Township May 31, 1977. Collected by B. Sproat. Determined by P. DeWitt. (T.L. Burger).

AN APHIDIID WASP (<u>Lysiphlebus testaceipes</u>) - KANSAS - Morton, Stevens, Haskell, and Finney Counties--light levels appearing in <u>Schizaphis graminum</u> (greenbug) infested sorghum; none in this area 14 days ago. (Shuman).

### FEDERAL AND STATE PROGRAMS

### DISEASES

OAT STEM RUST (Puccinia graminis var. avenae) - MINNESOTA -Generally light in southern States. As temperatures increased, stem rust increased rapidly becoming widespread but light throughout TEXAS, OKLAHOMA, KANSAS, and NEBRASKA. During early June infections occurred in east-central SOUTH DAKOTA and rapidly increased to epidemic levels in counties adjacent to the South Dakota and NORTH DAKOTA border with MINNESOTA. Early maturity of the majority of the crop prevented disaster, but some late fields had losses of 30-50%. Race 31 most prevalent race identified in 1977, see Table 1. As far as is known, the 1977 cultures are identical in virulence to those of race 31 that predominated in the U.S. rust population since 1965. Currently unknown whether the 1977 race 31 differs in aggressiveness from those observed in the past or if unusual environmental circumstances favored severe disease development. No major shift in cultivars grown, acreage planted, initial time of infection, initial infection level, or rust severity in the south was noted in 1977. This is the most serious outbreak of oat stem rust in the United States since the 1950's when epidemics occurred in the same area in 1953, 1954, and 1955. (Roelfs, Long, July 27 to August 9).

Table 1. Percent of isolates of each oat stem rust in collections received before August 8.

			% 0	f Isola	ates of	each	
	No. of		Oa	t Stem	Rust R	ace	
State	Collections	2	8	31	61	77	87
AL	3			100			
CA	1		100				
FL	2	40		60			
IA	13			100			
KS	8			100			
LA	4			75	25		
MN	16			100			
NE	18			98	2		
OK	3			100			
SC	3	78		22			
SD	3			100			
So. Texas	76	2		90	7	1	*
No. Texas	59	8		82	9	1	
WI	1			100		-	
To date197	7 210	4	*	88	6	1	*
Total197	386	2	*	66	28	1	*
Total1975	5 649	*	*	67	28	1	1

<sup>\*</sup> Less than 0.6%

Table 2. Percent of isolates of most common wheat stem rust races in collections received before August 8.

Isolates of Most Common Wheat Stem Rust Races	HNL HDL	ľ	9	,							4	H		10	1				* *	*
Rust	56 MBC														50	3			<b>⊢</b> *	*
tem	3 RCR						2		7									100	<b>⊢</b> *	*
ats	2-113 RHM		9																* *	*
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nommc	RKQ						1	(1)			9		17	1				(	7 -	-
st C	QSH		13	17		33	29	18	32		15	100	000	21				(	O 60	00
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tes o	QCB	33	56										4	52				,	33	7
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80	TNM	49		72	99	99	62	20	49	100	59		29	7		100	100	0	72	89
	No. of Collections	13	16	233	က	က	35	11	23	22	31	~	12	10	2	7	1	000	671	882
	State	AL-FL-GA-SC	AR-LA-MS	3;	IL	IA	N. S.	MIN	E C	HO	OK 3			No. Texas	> A	IM	WY	To date1977	al197	Total1975

\* Less than 0.6%

WISCONSIN - Douglas County--oat stem rust prevalence 100%/severity 5-10% in oat field in milk stage. (Lovett).

WHEAT STEM RUST (Puccinia graminis var. tritici) - More severe in southeastern States in 1977 than in 1976 but losses only trace in commercial wheat fields. Stem rust overwintered throughout the South in plots of McNair 701 in spite of an unusually cold winter. If a large acreage of a highly susceptible variety had been grown in the southeastern United States in 1977. losses would have been severe. Scattered light rains and warm temperatures favored stem rust occurrence in northern TEXAS,
OKLAHOMA, and KANSAS. Traces of stem rust on susceptible varieties
in commercial fields in Kansas and 40% severities observed in Kansas and NEBRASKA plots. In the spring wheat area, stem rust severities very light because of early crop maturity and resistant cultivars. Race 15-TNM (most commonly identified race) composed 50% of the isolate in 1977 compared with 72% in 1976 and 68% in 1975, see Table 2. Race 151-QSH second most commonly identified race at 20%. Race QSH composed 3% of the isolates in 1976 and 8% in 1975. The 1977 percentages for each race in the population will probably change as more identified from spring wheat. No new races with adequate virulence to be hazardous to small grains production detected to date in 1977. High temperatures and high inoculum density in some nurseries caused some temperaturesensitive resistances to become less effective. (Roelfs, Long, July 27 to August 7).

### INSECTS

GRASSHOPPERS (Melanoplus spp.) - WASHINGTON - Spokane County--2-20 per sq yd, moderate, throughout many areas at Green Bluff. Okanogan County--reached 50-70 per sq yd at Nespalem. (Bosley et al.). UTAH - Sevier County--heavy in Sheep Valley,  $\underline{\mathbf{M}}_{\bullet}$  sanguinipes dominant. About 200-300 per sq yd in some favorable feeding areas. (Moore). Washington County--30-40 per sq yd about Enterprise. (Crowe).

GYPSY MOTH (Lymantria dispar) - OHIO - First males in these counties. Guernsey County--1 adult in disparlure trap on utility pole near office of campground at Cambridge on July 19, 1977. Collected by R. Douglas. Determined by E.L. Todd. Portage County--1 adult in disparlure trap on west side of service plaza at Freedom on July 27, 1977. Collected by Barth and Stubbs (no initials given). Determined by D. Ferguson. (Roach).

JAPANESE BEETLE (Popillia japonica) - OHIO - Trumbull County-adults 0.53 per sweep of soybeans in 1 field. Ashtabula County-light adult damage in 1 vineyard. Wayne County-damage to grape leaves heavy in 1 vineyard, 19 adults on 1 leaf. (Drees).

SCREWWORM (Cochliomyia hominivorax) - Seven cases reported from continental United States July 24-30, all in Arizona. (Meadows). Total of 130 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,020 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 132,327,800 as follows: Texas 82,248,200; New Mexico 8,478,000; Arizona 41,601,600. Total of 140,047,400 sterile flies released within Barrier of Mexico. (Williams, Smith).

### HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) counts and damage heavy (all leaves severely mined) on 0.5 acre of cucumber at Waimanalo, Oahu. CARMINE SPIDER MITE (Tetranychus cinnabarinus) moderate to heavy (all leaves; 10+ individuals per sq inch) on 0.75 acre of pole beans at Waimanalo, moderate damage. (L. Nakahara).

Man and Animals - Alates of an ANT (Hypoponera punctatissima) "stinging" residents at Kalihiwai, Kauai, and residents and office personnel at Hilo, Hawaii Island in last half of July. Some "stings" caused welts at site of injury. This species reported from all major islands, but has never been recorded to cause injury before in Hawaiian literature. (Kitaguchi et al.).

Snails - GIANT AFRICAN SNAIL (Achatina fulica) activity very light on Kauai during July 1977. Few isolated reports following early morning showers including single snail sightings at Lawai and Kalaheo where pest was not known to occur before. Surveys for more specimens negative in both areas. Activity in Poipu resort areas continued heavy, especially in irrigated ground cover. (Sugawa).

Beneficial Insects - A GALL FLY (Procecidochares alani) noticeably increased (32-52% of terminals galled) on Hamakua pamakani at Ahualoa and Palani, Hawaii Island. (Matayoshi, Yoshioka). New host record for an APHELINID WASP (Encarsia sp.) (light thorax) in State. Several dozen specimens (8% parasitism) of this accidentally introduced parasite recently reared from sample of Orchamoplatus mammaeferus (a whitefly). This whitefly collected on variegated leafcroton from Palolo Valley, Oahu, by L. Nakahara, June 21, 1977. New host and island record: Single Encarsia sp. adult recovered from Dialeurodes kirkaldyi (a whitefly) on star jasmine at Lahaina, Maui, by N. Miyahira and L. Nakahara, April 13, 1977, both determined by S. Higa. (L. Nakahara).

### DETECTION

NEW STATE RECORDS

### INSECTS

BANK GRASS MITE (Oligonychus pratensis) - MISSOURI - Buchanan County. (p. 639).

A WEEVIL (Calomycterus setarius) - KENTUCKY - Fayette County-adults collected around window of residence at Lexington, by F. Horten, June 28, 1977. Determined by P.H. Freytag. (Sloderbeck).

NEW COUNTY and ISLAND RECORDS

### INSECTS

AN APHELINID WASP (Encarsia sp.) - HAWAII - Maui. (p. 652).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OREGON - Crook. (p. 640).

A CICADA (Cacama valvata) - NEVADA - Lincoln County--adult males collected at Elgin by R.C. Bechtel, J.B. Knight, and D.F. Zoller, July 18, 1977. Determined by R.C. Bechtel. (Bechtel).

AN ICHNEUMONID WASP (<u>Diaparsis</u> sp.) - INDIANA - Franklin. (p. 648).

AN ICHNEUMONID WASP (Lemophagus curtus) - INDIANA - Franklin. (p. 649).

SOUTHERN CHINCH BUG (Blissus insularis) - TEXAS - El Paso. (p. 639) (p. 639).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - KANSAS - Hamilton. (p. 638).

WESTERN CORN ROOTWORM (<u>Diabrotica</u> <u>virgifera</u>) - TEXAS - Victoria; INDIANA - Dubois. (p. 638).

ZIMMERMAN PINE MOTH (<u>Dioryctria</u> <u>zimmermani</u>) - WISCONSIN - Jefferson. (p. 647).

### WEEDS

DIFFUSE KNAPWEED (Centaurea diffusa) - CALIFORNIA - Plumas County-roadside north of Indian Falls, by D. Joley, July 30, 1977. Confirmed by D. Barbe. Plant eradicated. (Keffer).

MUSK THISTLE ( $\underline{\text{Carduus nutans}}$ ) - WISCONSIN - Washington County-found near Slinger, June 27, 1977. Collected and determined by E. Arnold. (Lovett).

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# Pest Interceptions of Quarantine Significance at Ports of Entry

# Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

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Desti	그	CA	USA	CA	CA	NY	AR	NY
Fort of	Miami	San Diego	Port Everglades	San Francisco	Hawaii	Kennedy Airport	Fort Smith	Kennedy Airport
Probable Origin	Philippines	Mexico	Hungary	India	Hawaii	South	France	Ireland
Host	on banana leaves from cargo	on leaves of bromeliads from cargo	with reed mats in car- go containers	in cucumbers from baggage	in quarters of military aircraft	in cut flowers South of Protea Afric from baggage	in wood dunnage from cargo	in soil with shamrock plants from mail
Life Stage	imperfect	uredial	adult	larval	adult	larval	larval	cyst
	Phyllostictina musarum (Cooke) Petr. a fungus Det. F.G. Pollack	Uredo nidularii P. Henn. a rust Det. F.G. Pollack	Chilodes maritima (Tauscher) a noctuid moth Det. E.L. Todd	Myiopardalis pardalina (Bigot) Baluchistan melon fly Det. R.H. Foote	Oedaleus abruptus (Thunberg)  a grasshopper Det, A.B. Gurney	Resseliella sp.  a cecidomyiid fly Det. R.J. Gagne	Saperda scalaris (Linnaeus) a cerambycid beetle Det. D.M. Anderson	Globodera rostochiensis (Woll.) golden nematode Mulvey & Stone Det. W. Friedman







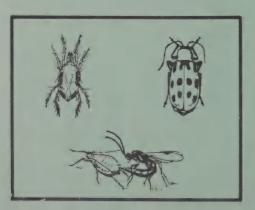
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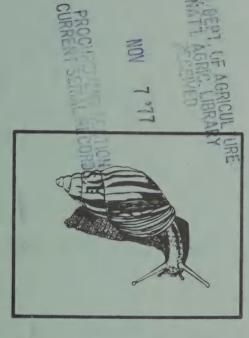
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August 26, 1977

# Cooperative

# PLANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

We cannot make address changes unless we have your mailing code

### COOPERATIVE PLANT PEST REPORT

### HIGHLIGHTS

### Current Conditions

CORN EARWORM, FALL ARMYWORM and other lepidopterous larval problems on many hosts in parts of many southern and several central States. Damage expected to be 30-40% on corn ears in Maryland. Heavy on sweet corn in New Jersey. (p. 660). Control problems on corn in Ohio. Total defoliation and ear damage common in Mississippi and Alabama. Late-planted corn destroyed in Tennessee. Damage heavy on corn in Kentucky. (p. 663-664). Economic on sorghum heads in Kansas; severe head damage in North Carolina (p. 659). Late plantings destroyed in Alabama. (p. 663). Extensive damage to millet in Mississippi. More than 50% of pastures and fields infested in northern Florida. (p. 666).

These pests heavy on soybeans in Oklahoma and South Carolina, and in 25% of fields in Tennessee. Rapid defoliation of untreated fields in North Carolina. Major pest in Virginia. (p. 659-660). Treatment needed in Florida and applied to one-third of acreage in Mississippi. (p. 668-669).

Controls general for these pests on peanuts in Alabama and needed in Florida. (p. 669). Problem on cotton in Mississippi; controls difficult in Alabama. (p. 670).

COMMON MAIZE RUST prevalent on corn in eastern two-thirds of Kansas, northeastern and east-central North Dakota, and in Iowa. Yield may be affected in south-central area of Wisconsin. (p. 661).

GREEN CLOVERWORM 10 or more per row ft of soybeans in Kansas, Illinois, Alabama, Tennessee, and Indiana. Worst since 1973 in Illinois. (p. 668).

High potential for WHITE PINE BLISTER RUST infection on pine in Wisconsin if cool, wet weather continues. (p. 673).

OAT STEM RUST losses in late-planted oats up to 50% in northeastern and east-central North Dakota. (p. 675).

### Detection

A MOSQUITO is a new State record for NEW HAMPSHIRE. (p. 674).

For new county and island records see page 676.

New host record for a MIDGE in Hawaii. (p. 671).

## Special Reports

Pests Not Known to Occur in the United States or of Limited Distribution. A Weevil (Baris lepidii Germar) (p. 680-685).

Reports in this issue are for the week ending August 19 unless otherwise indicated.

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### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

### INSECTS

CORN EARWORM (Heliothis zea) - IDAHO - Canyon County--first larvae of season August 15 on corn plants 14% infested near Parma. (Scott). WISCONSIN - Intense adult activity at several blacklight trapping sites, particularly on warmer nights. Dane County--based upon 1,550 degree-days at Madison, major flight should occur. Controls already begun on most sweet corn, usually combined with sprays for other insects. (Lovett). IOWA - Benton County--larvae in 50% of ear tips week ending August 12. (J.R. DeWitt).

KANSAS - Comanche County--corn earworm infestations threatening to economic on sorghum heads, averaged 1.5-3.4 larvae per head in 3 dough-stage fields; average larval size 0.5 inch. (Salsbury). Montgomery, Labette, and Crawford Counties--larvae 0.3-0.8 per sorghum head in milk to dough stage. (Hilbert). Southeastern area--some minor damage to soybean pods. (Kilgore). Kiowa, Pratt, and Pawnee Counties--adult flights heavy past 14 days. (Bell). OKLAHOMA - Sequoyah, Haskell, Muskogee, Wagoner, Le Flore, and McCurtain Counties--very heavy on soybeans in some areas, about 25% of 50 fields needed treatment. Jackson, Tillman, and Green Counties--corn earworm and FALL ARMYWORM (Spodoptera frugiperda) in 10-20% of sorghum heads and in 60% of whorls in some late-planted fields in Jackson County. (Arnold). ARKANSAS - Corn earworm averages per 3 row ft of soybeans by county (4 fields each): Conway--2.4, Faulkner--0.3, Lonoke--1.1, Prairie--0.7, Monroe--0.1, Phillips--0.1, Lee--0.3, St. Francis--0.8, Desha--0.4, and Jackson--0.1. (Dumas, Mayse). Poinsett and Craighead Counties-larvae above treatment level on some soybeans. (Kimbrough).

TENNESSEE - Middle and western areas--corn earworm ranged from occasional to 1-2 larvae per ft of row of soybeans; about 25% of fields infested in western area, controls applied to some fields; adult flight underway in southern counties of middle area. (Cagle et al.). ALABAMA - Madison County--increased, 1 per ft of row in many soybean fields. Morgan County--fewer larvae feeding in 20-acre soybean field. (Houston et al.).

SOUTH CAROLINA - Statewide--corn earworm, S. frugiperda, and BEET ARMYWORM (Spodoptera exigua) heavy in many soybean fields. Treatment needed but controls in short supply in some cases. (Douglass et al.). NORTH CAROLINA - Coastal Plains and Piedmont areas--mostly corn earworm and SORGHUM WEBWORM (Celama sorghiella) along with other species severely damaged sorghum heads. Carteret, Chatham, Wake, and Alamance Counties--larvae 5+ per sorghum head. (Hunt, Bunce). Statewide--controls effective for corn earworm on soybeans but defoliation 100% in some fields. Defoliation rapid in untreated infested fields. Wilson, Johnston, Chatham, and Wayne Counties--15-20 per ft of row. Pupated in many fields but all stages in most fields. Very long egg laying period made adequate control impossible with 1 treatment. (Hunt).

VIRGINIA - Eastern area--corn earworm continued major insect problem on soybeans with enormous populations detected in most susceptible fields. Gloucester County--ll fields (485 acres) infested, 9 of 11 fields averaged 1+ larvae per ft of row. Middlesex County--larvae very heavy. Accomack County--total of

2,829 corn earworm adults in blacklight traps at Painter Station August 6-15 (more than 4 times average number of adults per year for past 19 years). One more full generation expected, should begin about last week in August. Some pesticides in short supply. (Allen).

MARYLAND - Eastern Shore area--larvae of corn earworm along with EUROPEAN CORN BORER (Ostrinia nubilalis) and Spodoptera frugiperda in up to 60% of ears in some mature sweet corn stands August 6-19 in Caroline, Dorchester, and Wicomico Counties. Forecast of 30-40% ear damage throughout shore area; flight activity and egg laying at high levels and increasing. Late soybean and corn plantings favored for egg laying. Blacklight trap catches of 6-207 (averaged 93) adults per night. (Hellman, Pinto). PENNSYLVANIA - Southeastern area--averaged 10 corn earworm adults per blacklight trap daily throughout area, heavier counts expected in 21 days. (Tetrault). NEW JERSEY - Southern area--corn earworm and S. frugiperda very heavy on sweet corn. Expected to be problem until frost. (Vasvary).

POTATO LEAFHOPPER (Empoasca fabae) - NEW JERSEY - Average number of adults and nymphs per 25 sweeps of alfalfa by county: Burlington--134 at Columbus and 102 at Bordentown; Mercer--99 at Yard-ville; Monmouth--92 at Allentown and 88 at Clarksburg. (Vasvary). OHIO - Counts per sweep of forage legumes by county: Champaign--6.8, Logan--0.6, and Union--0.8. On soybeans: Champaign--40, Union--2.2, Logan and Delaware--fewer than 1. (Drees). KENTUCKY - Adults generally very light, economic in occasional field, August 8-10. Range (and average) per sweep of alfalfa by county: Lincoln--0.02-1.05 (0.35) in 4 fields 14 to 19 inches tall and Washington--0-0.15 (0.05) in 9 fields 14 to 25 inches tall. (Christensen). MINNESOTA - Northwestern and central districts--adults appeared on alfalfa, averaged 15 and 100 per 100 sweeps, respectively. (Sreenivasam). WISCONSIN - South-central, south-western, central, and east-central areas--4 per 10 sweeps to 15 per sweep of alfalfa, heavy in Green Lake and Fond du Lac Counties. Counts on potatoes: Central Sands--1 per sweep or less, Spring Green--averaged 2 per 10 sweeps, many areas--severe injury to garden potatoes. On snap beans: Central Sands--averaged 4 per 10 sweeps. (Lovett).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Curry and Roosevelt Counties--Iight to moderate on resistant sorghum varieties, 25% of acreage required treatment. (Durkin). KANSAS - Gray, Meade, and Kearney Counties--averaged 0-3,000 per sorghum plant; parasitism still light, lady beetles heavy. (Shuman). Comanche County--21-2,650 per sorghum plant in dough stage in 3 dryland fields, parasitism moderate and increasing. (Salsbury).

TOBACCO HORNWORM (Manduca sexta) - NORTH CAROLINA - Bladen County-34 of 86 tobacco fields at threshold, 0-50% of plants infested, 0% most frequent. (Kirby, Reagan).

### CORN, SORGHUM, SUGARCANE

### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Statewide--still most widespread corn disease, more prevalent in eastern two-thirds of State, lesser amounts in western one-third. Ford County--infected 100% of plants in 2 sprinkler irrigated corn fields. Haskell County--infected about 10% of plants in 1 field. (Sim).

SOUTH DAKOTA - Roberts, Grant, Codington, Deuel, Brookings, Moody, Minnehaha, McCook, Miner, Kingsbury, and Hamlin Counties--common maize rust severity trace to 3% in all commercial field corn surveyed week ending August 11. NORTH DAKOTA - Cass and Richland Counties--severity trace to 3% in all commercial field corn surveyed week ending August 11. Traill, Grand Forks, Walsh, Pembina, Nelson, Griggs, Steele, and Barnes Counties--current prevalence 90-100%/severity trace to 5%. (Jons).

IOWA - Common maize rust prevalence 99%/severity averaged 1-5% in corn fields August 6-12. (Williams). ILLINOIS - Prevalence/severity in commercial field corn by county August 11-12: Tazewell--7%/trace, Peoria--24%/trace to 1%, Bureau--18% trace to 1%, Henry--2%/trace, Knox--80%/trace to 5%, McDonough--40%/trace to 1%, Cass--8%/trace, Sangamon--12%/trace to 1%. (Jordan). WISCONSIN - Dodge County--sweet corn especially affected in Beaver Dam. Prevalence 100% with some 30% severity in many fields beginning to pollinate. Some yellowed and partially dead leaves. Yield, quality, and kernel depth may be affected. (Lovett).

COMMON SMUT (Ustilago maydis) - SOUTH DAKOTA - Eastern area-trace amounts in all field corn surveyed week ending August 11. NORTH DAKOTA - Southeastern area--trace amounts in all field corn surveyed week ending August 11. (Jons).

IOWA - Common smut prevalence in sampled corn fields by county August 6-12: Fremont--10%, Lyon--trace, Lee--1-25%. (Williams). ILLINOIS - Prevalence (and plant parts infected) in commercial field corn by county August 11-12: Tazewell--18% (tassel, stalk, ear, leaf), Peoria--8% (stalk, ear), Bureau--2% (stalk, tassel), Henry--8% (stalk, tassel, ear), Knox--4% (stalk, ear), McDonough--6% (stalk, tassel, ear), Cass--4% (stalk, tassel, ear), Sangamon--9% (stalk, tassel, ear). (Jordan). OHIO - Brown County--severity 10% and 30% in 2 separate corn fields August 7-13. (Hite).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity in commercial field corn in central and western areas August 11-12: Tazewell--40%/10-30%, Peoria--60%/15-20%, Bureau--15%/5-10%, Henry--65%/15-20%, Knox--20%/10%, McDonough--18%/12%, Sangamon--14%/5-10%. Generally only lower leaves affected. (Jordan).

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - OHIO - Brown County--prevalence 100%/severity 30% on lower 4-5 leaves in 1 corn field August 7-13. (Hite).

SOOTY STRIPE (Ramulispora sorghi) - KANSAS - Prevalence in sorghum plants by county: Osage--15-25% and Montgomery--60-80%. (Sim).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Montgomery County--affected 25-35% of corn plants. (Sim).

BACTERIAL STRIPE (Pseudomonas andropogonis) - KANSAS - Gray County--in 2 of 7 fields, Meade County--in 1 of 5 fields, Kearny County--l of 7 fields; prevalence trace to 20%. All fields irrigated. (Sim). OHIO - Brown County--prevalence 5% in several corn fields, on lower leaves August 7-13. (Hite).

SORGHUM BACTERIAL STREAK (Xanthomonas holcicola) - KANSAS - Gray County--in 7 of 7 sorghum fields, Meade County--in 4 of 5 fields, Kearny County--in 2 of 7 fields; prevalence 20-50%. All fields irrigated. (Sim).

STEWART'S WILT (Erwinia stewartii) - OHIO - Brown County--severity trace to 10% in several corn fields August 7-13. (Hite).

MAIZE DWARF MOSAIC VIRUS - ILLINOIS - Eastern and central areas-scattered plants infected in 2 fields in La Salle (surveyed July 28) and Vermilion (surveyed July 22) Counties. Plants stunted; leaves mottled and streaked. (Jordan).

### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - Counts in corn in northeast and central districts week ending August 5: second generation adults still heavy in field margins. Average of 1+ egg masses per plant in 17 popcorn fields in Antelope, Pierce, and Wheeler Counties (Koinzan) and of 1.5 egg masses and/or new larvae per plant in 1 field each in York and Fillmore Counties (Monke). Pupation of first generation larvae in northeast district reached 100% and emergence about 85%. Adults averaged 170 and 750 per night at light traps in Dixon and Madison Counties, respectively. (Witkowski). Dawson County--averages of 0.1-0.2 egg mass per plant in 70 fields August 2. (Raun).

KANSAS - Kearny County--European corn borer infested up to 10% of sorghum plants, trace head breakage. (Shuman). Comanche and Kiowa Counties--in 55-85% of mature corn. (Salsbury). MISSOURI - Southwestern and central areas--larvae and adults heavy on corn, may be third generation. (Munson). IOWA - Pottawattamie, Shelby, Harrison, Floyd, Worth, and Hancock Counties--second generation larvae caused economic damage to corn week ending August 12. Larvae bored into 20% of cobs in Floyd County and ranged 6-8 per stalk in Shelby County. (J.R. DeWitt).

MINNESOTA - European corn borer adults unusually heavy compared with 1976. Egg masses and young larvae in all districts. (Sreenivasam). WISCONSIN - No more pupation expected this year due to decreased day length and lower temperatures. Adult activity should decrease greatly on corn next 7 days or so. Due to cooler temperatures, adult activity will be extended and fluctuate with nightly temperatures. Eggs on 5% or fewer of sweet corn plants in early silk. (Lovett).

INDIANA - Vigo County--European corn borer adults and occasional egg masses on sorghum with heads beginning to emerge in 1 field. (Meyer). OHIO - Marion and Union Counties--larvae, 10-13 mm, bored into stalks at various nodes and into ears. Infested 20% of plants in Union County. (Drees). Ashland County--second generation larvae on early and late-planted corn, as many as 20% of ears infested. Ears infested by 2-5 larvae of various instars, 5-13 mm. (Synder).

MARYLAND - Statewide--European corn borer flight activity and egg laying increased August 6-19; blacklight trap catches 2-180 (averaged 64.2) per night. (Hellman, Pinto). DELAWARE - Sussex County--larvae in average of 20-30% untreated, sweet bell peppers in western area. Adults very abundant in most areas, 100+ per blacklight trap per night some nights. (Burbutis, Kelsey).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - St. Johns County--destroyed 10 acres of corn and sorghum at Hastings. (Workman). ALABAMA - Lee County--larvae destroyed 75-85% of 3 to 8-inch grain sorghum plants in 20-acre field. This late planting similar to many thousands of fields following drought-killed corn. FALL ARMYWORM (Spodoptera frugiperda) destroyed remainder of grain sorghum plants in this field. (Starr et al.).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - Rice County--pupae or adults about 20% of second generation on corn near Alden by August 15. (Poston). Comanche County--small percentage pupated in mature corn field. Kiowa County--no pupae in 2 fields of dent to mature corn, infested plants ranged 65-100%; Montgomery County--infestations 0-12% in 5 mature corn fields; some girdling and larvae without spots (Hilbert). MISSOURI - Southeastern area--larvae girdled cornstalks 14 days earlier than in past years. (Barry).

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Osage County-infested whorls in 40% of 20-inch sorghum. Labette County-infested whorls in 20% of 14-inch sorghum. (Hilbert). NEBRASKA - Hamilton County--first adult of season in light trap July 29. (Cranfill, Miller). ILLINOIS - Champaign County--fall armyworm infested 80% of sweet corn on 1 farm. (Black). INDIANA - Warrick County--about 80% of ears had nearly full-grown larvae, 20% had younger larvae, in corn field with green silks. (Matthew). OHIO - Franklin County--variable-sized larvae infested 15% of untreated corn in plots August 15. Damage mostly at ear tips and will continue for several weeks. (Holdsworth). Lawrence County--damaged 100% of sweet corn plants in small areas August 11; 2-6 sprays applied with no control. (Miller).

MISSISSIPPI - Statewide--fall armyworm still problem in late-planted corn and grain sorghum. Complete defoliation and ear damage not uncommon in untreated corn. Problems expected into September. (Anderson). ALABAMA - Northern area--larvae of all ages heavy, damaged thousands of acres of corn week ending August 12. Larvae 2-25 per cornstalks in Jackson, Blount, Morgan, Colbert, and other counties. (Dyar et al.). Houston County--full-grown larvae damaged 2 fields of sugarcane; Talladega County--damaged 1 field of sorghum for syrup week ending August 12. (Roney, Bass).

De Kalb County--currently fall armyworm heavy in 50+ acre field of corn, larvae 1-8 per ear with leaves almost stripped from stalks. (Smith). Lee, Tallapoosa, and Talladega Counties--many corn fields stripped of leaves, ears damaged beyond profitable harvest. (Baker et al.).

TENNESSEE - Statewide--fall armyworm destroyed very late corn in all sections. Larvae destroyed about 150 acres in milk stage in Franklin, Lincoln, and Lawrence Counties, fed on stalks, leaves, and ears. (Pendergrass et al.). Lincoln County--this species and YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) completely destroyed 300 acres of corn, many more fields damaged. Controls not effective. (Winsett).

KENTUCKY - Statewide--larval damage heavy to corn in many areas, damaged leaves, tassels and or ears depending upon stage of corn. Daviess County--60-75 percent of ears infested with average of l large larva and up to 1.5 small larvae per ear in 900 acres at Owensboro, many fields in early dent stage, larvae entered ears at tips and through husks along the sides and at the shanks, very little leaf feeding in these fields. Other fields in area infested. (Gregory). Logan County--larvae averaged 15 per plant in poor stand of late-planted corn. (Sloderbeck).

NORTH CAROLINA - Piedmont and Mountain areas-fall armyworm damage continued in whorls and heads of late corn and sorghum. Egg laying continued on tender grass crops (corn, sorghum, Bermudagrass, and others). Larvae averaged 3 per plant in 10-acre Buncombe County corn field and 20-acre Alamance County sorghum field. (Hunt, Krenzer). WEST VIRGINIA - Marshall County-larval damage moderate to 30% of stalks in 6 acres of late-planted field corn. Damaged tassels and foliage. (Hacker, Lippert). MARYLAND - See CORN EARWORM in Maryland. Eastern Shore-heavy on most late-planted field corn; controls applied but continued egg laying required repeat applications. (Hellman, Pinto).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - IDAHO - Adult flights peaked July 20-22, catches 2 times higher than in 1976. Large infestations in sweet and field corn in Buhl and Wendel areas of Twin Falls and Gooding Counties. Larvae burrowed into ears by August 5. (Saunders). NEBRASKA - Dawson and Lincoln Counties--no fresh egg masses on corn checked, larvae still feeding on brown silks and have not entered ears in most fields. Infestations averaged up to 1 larva per ear tip on 20% of plants. Most corn will dent before larvae enter ears and damage will not be severe. (Raun).

SORGHUM WEBWORM (Celama sorghiella) - KANSAS - Montgomery County-1-4 larvae per sorghum head on 10-40% of heads in 2 fields in milk to dough stage. (Hilbert).

CORN ROOTWORMS (Diabrotica spp.) - IOWA - Jackson County--NORTHERN CORN ROOTWORM (D. longicornis) and WESTERN CORN ROOTWORM (D. virgifera) 5-10 per damaged corn ear tip week ending August 12. (J.R. DeWitt). WISCONSIN - Diabrotica spp. adults heavy on corn, mainly on late sweet corn. Counts of 10-15 per plant not unusual in sweet corn with green silks, although pollination usually completed. (Lovett). ILLINOIS - New D. virgifera county records.

Franklin County--corn rootworms collected on corn 2 miles north-west of Ewing by C.R. Swope, August 10, 1977. Richland County--collected on corn 2 miles south of Dundas by P.R. Wirth, August 12. Both determined by J. Bouseman. (Black).

INDIANA - New D. virgifera county records by county: Union near Liberty; Franklin near Fairfield; Ripley near Penntown; and Dearborn near Dover. All collected from grain corn by R. Meyer, August 17, 1977. All determined by R. Meyer; confirmed by D. Leva. All specimens collected in fewer than 15 minutes. D. virgifera now in all northwestern, north-central, northeastern, west-central, and east-central counties. (Meyer). Tippecanoe County--male to female catch in 10 sticky traps in corn field August 11: D. longicornis 1,344:402 and D. virgifera 538:230 (Meyer); mean of 28 adults of D. longicornis and D. virgifera (4 northerns to 1 western) per ear in sweet corn plot (York).

OHIO - New D. virgifera county record. Ashland--collected on corn 2 miles east of Nankin by M. Casey and B. Schmidt, August 18, 1977. Determined by G. Szatmari-Goodman. D. longicornis statewide-most corn silks died, resulting in migration to flowers and weedy areas. Average of 12.2 adults on sunflowers in soybean field in Union County August 16. (Drees). Females will be moving back to corn to lay eggs in September. Adults per plant on late-planted corn (silks still green): Ashland--3.2, Wayne--11.2, Huron--6.5, Marion--2.6 (Szatmari-Goodman et al.); adults per ear: Delaware--2.3, Marion 4.2, Union 2.3+ (Drees).

BANKS GRASS MITE (Oligonychus pratensis) - NEVADA - Churchill County--heavy infestations with heavy damage to silage corn at Fallon. (Stitt et al.). NEW MEXICO - Curry, Roosevelt, Lea, and Chaves Counties--heavy to very heavy on early planted field corn. Late-planted corn infestations moderate but increasing. Most treatments ineffective in heavily infested fields. (Durkin). OKLAHOMA - Jackson, Tillman, and Greer Counties--very heavy in scattered sorghum fields, damage as high as flag leaf. Most fields light to moderate. (Arnold).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - NEBRASKA - Dawson and eastern Lincoln Counties—colonies of this species and BANKS GRASS MITE (Oligonychus pratensis) heavy and building up on lower leaves in 100 corn fields August 2. Leaves not discolored. Small colonies above ear on some plants. Corn about 10 days from dent stage. (Raun). Antelope, Dixon, Pierce, and Wayne Counties—same condition but corn in milk stage to dent. (Witkowski, Koinzan). Box Butte County—on ear leaf in some fields. (Marquardt). IOWA—Woodbury, Plymouth, Johnson, Pottawattamie, Monona, and Harrison Counties—twospotted spider mite heavy, averaged 10-15 per sq inch on leaves of field corn week ending August 12. Plymouth County—damaged lower corn leaves. (J.R. DeWitt).

### SMALL GRAINS

### DISEASES

WHEAT LEAF RUST (Puccinia recondita) - NORTH DAKOTA - Mountrail County--prevalence 100%/severity 5% on Cando durum wheat. (Jons).

OAT CROWN RUST (Puccinia coronata) - NORTH DAKOTA - Pierce County--prevalence 100%/severity 10% in 1 oat field. (Jons).

ERGOT (Claviceps purpurea) - NORTH DAKOTA - Cass County--trace amounts in 1 commercial triticale field. (Jons).

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Forrest County--larvae extensively damaged 175 acres of millet. (Anderson). SOUTH CAROLINA - Greenwood County--completely destroyed 15-acre field of 12-inch millet. Larvae, 10-15 per sq ft (heavy), moved into heads of adjacent planting of sunflowers, Coastal Bermudagrass, and soybeans across paved road. (Douglass).

ALFALFA WEBWORM (Loxostege commixtalis) - IOWA - Pottawattamie, Cass, Union, and Harrison Counties--larvae, (0.5 to 1 inch long) up to 10 per sq ft of alfalfa, caused economic damage week ending August 12. Treatments necessary. (J.R. DeWitt).

### TURF, PASTURES, RANGELAND

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Winston County -larval damage serious on 65-acre planting of sorghum-sudan at Arley, 9 acres of sorghum-sudan and 30-acre and 9-acre fields of Coastal Bermudagrass at Double Springs, and 9 acres of Coastal Bermudagrass at Haleyville week ending August 12. Most widespread and damaging ever. (Murphy). Statewide--all larval instars and damage heavy. Dollar loss and control costs highest remembered. Insecticides scarce. Controls poor. (McQueen). Lee County-currently, old larvae stripped fescue pasture, controls poor and being repeated. Stripped 50% of Coastal Bermudagrass in 6-acre field. Chambers County--500 acres stripped for second time in 30 days, controls poor. (Lowe et al.). FLORIDA - Northern areaunusually damaging to pasture and hay fields. Infested 601,593 of 1,031,358 acres of improved pastures and 156,410 of 202,643 acres of hay pastures. Approved controls not effective. A 15-day crisis exemption for use of a carbamate on pasture and hay was approved. By August 15, about 137,375 acres had been treated from the ground and 191,800 by air. (Koehler).

### FORAGE LEGUMES

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Marengo County-damaged alfalfa in 100+ acre field week ending August 12. (Yates).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - South-central, southwestern, central, and east-central areas--larvae 1 per 10 sweeps to 4 per sweep of alfalfa. Larvae recently hatched to full-grown, about 1.5 inches. (Lovett).

ALFALFA CATERPILLAR (Colias eurytheme) - MISSOURI - Southwestern area--larvae averaged 2 and 3 per sweep of forage legumes. (Huggans).

GARDEN WEBWORM (Loxostege rantalis) - OKLAHOMA - Harper County-5-6 per alfalfa plant, heavy; some fields treated, others cut. Jackson, Tillman, and Kiowa Counties--moderate to heavy on seed alfalfa. (Arnold).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Mason and Smith Valleys--mainly this species along with BLUE ALFALFA APHID (A. kondoi) 10-100 (averaged 30) per sweep of hay alfalfa, infestations spotty within fields. (Knight).

### SOYBEANS

### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - IOWA - Prevalence/
severity in soybean fields by county August 6-12: Lee--10-50%/
trace to 10%, Van Buren--10%/trace. (Williams). ILLINOIS - Central
and western areas--prevalence/severity in commercial soybean
fields by county August 11-12: Tazewell--90%/18%, Peoria--85%/
18%, Bureau--78%/19%, Henry--5%/1%, Knox--20%/4%, McDonough-26%/7%, Sangamon--45%/8%, Cass--2%/trace. (Jordan). OHIO - Brown
County--prevalence 100% in 1 soybean field; lower leaves defoliated,
upper 50% of leaves on plants infected August 7-13. (Hite).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - IOWA - Lee County--prevalence 1-10%/severity 50-100% in several soybean fields August 6-12. (Williams). ILLINOIS - McDonough, Cass, and Sangamon Counties--typical symptoms on pods and stems in groups of soybean plants in fields August 11-12. Infections on leaves in Cass County. (Jordan).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - ILLINOIS - Central and western areas--prevalence/severity in commercial soybean fields by county August 11-12: Tazewell--35%/8%, Peoria--14%/trace, McDonough--40%/10%, Cass--60%/5%, Sangamon--95%/10%. (Jordan). OHIO - Brown County--prevalence 100%, all leaves covered with lesions in 1 soybean field August 7-13. (Hite).

PHYLLOSTICTA LEAF SPOT (Phyllosticta sojaecola) - ILLINOIS - Central and western areas--prevalence/severity in commercial soybean fields by county August 11-12: Tazewell--7%/1%, Knox--3%/trace. (Jordan).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS - Edwards County--infected about 80% of soybean plants in 1 field, some leaf shredding. (Sim). SOUTH DAKOTA - Eastern area--prevalence 100% in soybean fields/severity 1-2% in most fields week ending August 11. NORTH DAKOTA - Southeastern area--prevalence 100% in soybean fields/severity 5-10% in most fields week ending August 11. Traill, Grand Forks, Walsh, Pembina, Nelson, Griggs, Steele, and Barnes Counties--current prevalence 100%/severity 1-10% in soybean fields surveyed. (Jons). ILLINOIS - Central and western areas--prevalence/severity in commercial soybean fields by county August 11-12: Tazewell--12%/4%, Peoria-48%/12%, Bureau--52%/11%, Henry--80%/15%, Knox--70%/10%, McDonough--3%/trace to 1%. (Jordan).

SOYBEAN MOSAIC VIRUS - OHIO - Brown County--in scattered soybean plants along edges of field August 7-13. (Hite).

### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Kay County-averaged 1 per 3 row ft in mung beans. Payne County--adults common at lights at Stillwater. (Arnold). ARKANSAS - Northeastern area-larvae caused up to 15% soybean defoliation. (Kimbrough). Average per 3 row ft of soybeans by county (4 fields each): Conway--28.3, Faulkner--6.5, Lonoke--2.5, Prairie--14.8, Monroe-7.1, Phillips--0.6, Lee--3.7, St. Francis--0.4, and Jackson--1.2. (Dumas, Mayse). KANSAS - Pawnee and Saline Counties--up to 20 per row ft, heavy on soybeans. Ford and Gray Counties--heavy infestations. (Brooks, Gates). South-central and southeastern area-larvae mostly 1 inch to full grown; 15-30 larvae per row ft not uncommon in southeastern area. (Kilgore, Nuttelman). Comanche County--averaged 12 per row ft in fully podded soybeans. Kiowa and Barton Counties--larvae 1st instar to full grown. (Salsbury). All affected areas treated. Kiowa and Pawnee Counties--adult flights heavy in blacklight traps. (Bell).

IOWA - Story County--green cloverworm larvae averaged 7+ per linear ft of row on soybeans week ending August 12. Adults in fields decreased. (J.R. DeWitt). ILLINOIS - Worst since 1973. Widespread on soybeans, 30+ larvae per ft of row in occasional fields. Some parasitism, few disease outbreaks in heavier infestations. (Black). WISCONSIN - South-central and central counties-averaged 2-4 per ft of row of soybeans. Many small larvae at Hancock indicates eggs still hatching. Larger larvae nearly full grown. (Lovett). MISSISSIPPI - Lowndes, Noxubee, Kemper, Winston, and Oktibbeha Counties--larvae 4-19 per 25 sweeps of pod-set stage soybeans. Defoliation 5-30%. Economic damage about 20%. (Anderson). ALABAMA - Larvae per row ft of soybeans in northern counties: Madison--10, Winston--10-30, Lauderdale--3-20, Lee and others-lighter. (Freeman et al.).

TENNESSEE - Statewide--green cloverworm 5-20+ per ft of row of soybeans in most areas, many larvae diseased. Treatment not justified. (Patrick et al.). KENTUCKY - Warren and Logan Counties-majority of larvae in middle instars, several larvae diseased; ranged 0.3-19.7 per 10 sweeps in 8 soybean fields. Larvae and damage in fields where plants blooming or beginning to set pods heavier than in fields where pods beginning to fill. Nearly 400 acres of late-planted beans treated in Logan County, defoliation almost 20%, and mostly early instars at time of treatment. (Sloderbeck). INDIANA - Jasper County--15-20 larvae per ft of row in soybean fields. (York). Central districts--fewer numbers, maximum of 8-12 per yd in Parke County field. (Meyer). Warrick County--16 larvae per ft of row in 1 field. (Matthew).

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Middle and western areas--occasional to 2-3 larvae per ft of row of soybeans. Pod damage in some fields. (Gordon, White). FLORIDA - Alachua, Columbia, Levy, and Suwannee Counties--10% of 3,000 acres of young soybeans required treatment. (Baker). VIRGINIA - Accomack County--total of 4,273 adults trapped August 6-15 at Painter, more than 4 times average yearly output for last 19 years. One more full generation expected about last week in August. Some pesticides in short supply. (Allen).

BEET ARMYWORM (Spodoptera exigua) - MISSISSIPPI - Delta counties-larval feeding on soybean foliage and small pods economic. Treatment applied to one-third of soybean acreage for S. frugiperda,
SOYBEAN LOOPER (Pseudoplusia includens), CABBAGE LOOPER
(Trichoplusia ni), and GREEN CLOVERWORM (Plathypena scabra).
(Mitchell).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Alachua County--40-acre soybean field treated at Archer, the only field of 3,000 acres that needed treatment. (Baker).

GREEN STINK BUG (Acrosternum hilare) - INDIANA - Southern and central districts-adults more common in soybeans in 1977 than usual. East-central district-nymphs more common than in other districts. Howard County-field averaged 1 adult per yd of row, heaviest observed anywhere. (Meyer).

### **PEANUTS**

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Southeastern area--continued major pest throughout the 200,000 acres of peanuts, controls general. (Presley et al.). FLORIDA - Alachua and Levy Counties--this species and CORN EARWORM (Heliothis zea) economic on 300 of 2,000 acres of peanuts, treatments needed. (Baker).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Jackson County--15% of peanut fields needed treatment. (Linker).

### COTTON

### INSECTS

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Jackson, Tillman, Harmon, Greer, and Kiowa Counties--punctured squares 5-10% in most cotton fields, up to 29% in few isolated fields. Grady County--1-5% punctured squares. (Arnold). MISSISSIPPI - Punctured cotton squares by county: Alcorn--1% on 250 acres, Attala--4% on 4,000, Calhoun--5% on 6,000, Carroll--6% on 1,500, Holmes--10% on 800, Itawamba--1% on 1,200, Jasper--80% on 300, Leake--13% on 1,400, Lee--4% on 900, Lincoln--20% on 600, Madison--5% on 2,500, Montgomery--0-16% on 2,700, Newton--8% on 30, Pontotoc--1% on 100. (Anderson). ALABAMA - Northern area--populations and damage very light, only 1 cotton field near economic levels August 5. (Davis). Southern and central areas--infested 10-50% of cotton. Numbers and damage still light compared with most years and lightest since 1963. (Davis et al.). Current numbers and damage continue relatively light statewide. Northern area--economic in few fields. Southern and central areas--under control by treatments for BOLLWORMS (Heliothis spp.) and FALL ARMYWORM (Spodoptera frugiperda). (McQueen).

BOLLWORMS (Heliothis spp.) - NEW MEXICO - Pecos and Rio Grande Valleys--cotton fields averaged 10-30% infestation by 2nd to 5th instar larvae of BOLLWORM (H. zea). No eggs or young larvae. (Durkin). LOUISIANA - Northeastern area--mostly H. zea from 40 on August 8 up to 250 by August 10 in light trap at Winnsboro, only 1 or 2 TOBACCO BUDWORM (H. virescens) adults each night. Adults in light trap in upper Red River Valley near Coushatta shifted toward more H. virescens, from 70 H. zea and 12 H. virescens moths on August 10, to 25 H. zea and 23 H. virescens on August 12. The moth catch in a light trap on the Red River Valley Experiment Station averaged 25 H. zea and 5 H. virescens per night week of August 8. Adults in fields about 50% H. virescens. Central area and upper Red River Valley--up to 100 eggs per 100 plants in Avoyelles, Rapides, and Grant Parishes, eggs 100-600 and live larvae up to 100 per 100 plants in upper Red River Valley. Northeastern area--eggs up to 30 per 100 plants in some fields. (Tynes).

OKLAHOMA - Harmon, Greer, and Kiowa Counties -- many bollworm eggs laid, 5-18 per cotton terminal on 50% of terminals. Larvae 2-14 per 100 terminals and damaged squares ranged 2-30%. Grady Countydamaged squares up to 14%. H. virescens larvae 5-30% in southwestern counties but 62% in treated Grady County plots. (Arnold). ARKANSAS - Northeastern area--H. zea relatively heavy in cotton fields. (Kimbrough). Southeastern area -- H. zea and H. virescens larvae averaged 3,015 per 56 row ft, eggs averaged 30-40 per 56 row ft. Ashley, Desha, and Jefferson Counties -- adults still relatively heavy. (Wall). MISSISSIPPI - H. zea larvae on cotton relatively heavy. (Wall). MISSISSIPPI - H. Zea larvae on cotton by county: Alcorn--35% on 250 acres, Calhoun--7% on 6,000, Attala--5% on 4,000, Carroll--3% on 1,500, Holmes--11% on 1,200 (eggs heavy), Itawamba--10% on 1,200, Jasper--20% on 300, Leake--7% on 1,400, Lee--6% on 900, Lincoln 10% on 600, Lowndes--15% on 1,400, Lee--6% on 900, Montropens, 5% on 2,700 (eggs 1,000, Madison--10% on 2,500, Montgomery--5% on 2,700 (eggs light), Newton--11% on 30, Pontotoc--10% on 100, Prentiss--12% on 600, Quitman--10% up to 35% on 2,000, Sharkey--10% on 1,200 (eggs 10-100%), Tate--5% up to 20% on 3,000, Webster--6% on 300, Yazoo--15% on 30. No treatment needed in some fields, 10%of acreage in Panola County not treated to date. (Anderson).

ALABAMA - Southern and central areas--Heliothis spp. decreased. Northern area--increased, larvae averaged 10-30 per 100 terminals in many cotton fields week ending August 12. (Davis et al.). ALABAMA - Statewide--currently, Heliothis spp. larvae averaged 2-25 per 100 cotton stalks in many fields. Adult flights increased with H. virescens beginning to constitute 25-60% of total. (Freeman et al.). TENNESSEE - Statewide--H. zea continued to damage cotton in all growing areas. Larvae and eggs still heavy, 1-17 per 100 terminals. Controls effective when applied properly. Populations heaviest in late cotton. FALL ARMYWORM (Spodoptera frugiperda) also in many fields. (Cagle et al.).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Statewide-larvae continued problem on cotton in some areas. Control good in most fields. Noxubee County--new egg masses noted. (Anderson).

ALABAMA - Statewide--predominant cotton pest in most of State for first time in history of cotton production week ending August 12. Various instar larvae 1 or more per ft of row in many fields. Larvae and damage misidentified as BOLLWORMS (Heliothis spp.). Damage to squares, blooms, and bolls varied considerably during larval development. Controls difficult. Southern and central areas--adult flights and egg laying continued heavy. (Conley et al.).

Statewide--fall armyworm adults currently heavy. Dead adults in Talladega County in middle of cotton rows ranged 6-22 per ft, averaging about 263,000 per acre. Eggs heavy. No such population previously recorded. Major cotton pest in all counties. (O'Daniel et al.).

TENNESSEE - Middle and western areas--fall armyworm continued to damage cotton. Up to 6 larvae per 100 terminals in middle area. Larvae fed on blooms and large bolls in infested fields. (Gordon, White). SOUTH CAROLINA - Statewide--infestations light to heavy in many cotton fields. Marion County--defoliation 40-60% in 3 fields, larvae 400-500 per 100 plants. Marion, Dillon, Florence, Sumter, Clarendon, and Greenwood Counties--larvae 15-50 (100+ in some fields) per 100 plants. (Douglass, Griffith).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Jackson, Tillman, Harmon, Greer, and Kiowa Counties--moderate to heavy in most irrigated cotton fields. Viral disease increased and controlled loopers in many fields. Looper eggs 20-25 per 100 terminals in margins of many fields. (Arnold).

### HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) heavily mined 50-75% of leaves in 7 acres of watermelon at Kahuku, Oahu. Net total of 17+ acres of watermelon totally destroyed at Kahuku during 1977, due primarily to defoliation by this species. Potential wholesale revenue of \$50,000+ lost by affected growers. CARMINE SPIDER MITE (Tetranychus cinnabarinus) counts and foliar damage heavy on 0.25 acre of sweetpotato and dasheen (5,000 sq ft) at Waiahole, Oahu. SWEETPOTATO LEAFMINER (Bedellia orchilella) counts heavy (80% of leaves, 3-20 mines per leaf) and foliar damage moderate on 1 acre of sweetpotato at Waiahole Valley. (L. Nakahara).

Ornamentals - New host record for a MIDGE (Contarinia maculipennis) in State. Damage heavy (over 50% of blossoms affected) on 2 acres of Plumeria rubra f. acutifolia (plumeria) at Waimanalo, Oahu, during early July. Collected by R. Vargas and L. Nakahara from plumeria at same location on July 14, 1977. Determined by R.J. Gagne. Surveys conducted on plumeria during mid-July showed light damage (10-20% of blossoms affected) on chemically treated plumeria at Waimanalo and no evidence of pest in drier plumeria plantings (unsprayed) at Waianae, Oahu. Larvae caused bud drop, malformation, and discoloration of plumeria blossoms. (L. Nakahara). A WEEVIL (Otiorhynchus cribricollis) counts and damage heavy (75% of blossoms) on small planting (100-ft row) of chrysanthemum at upper Kula, Maui. Adults damaged buds and open blossoms; larvae damaged roots. (Miyahira).

Miscellaneous - New island record for a SPHINGID MOTH (Macroglossum pyrrhostictum). Three adults collected at large at Olinda, Maui (2,500-ft elevation), by M. Ignacio, August 5, 1977. Determined by S. Higa. (Miyahira). Total of 14 adult males of an ANT (Pseudomyrmex gracilis mexicanus) collected in light trap at Kailua, Oahu, during 3 weeks in late July and early August. (Beardsley).

### **TOBACCO**

### INSECTS

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Trousdale, Smith, Sumner, and Macon Counties--above control level in 5 of 10 tobacco fields, larvae 0-1,250 per acre. (Gregory).

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Trousdale, Smith, Sumner, and Macon Counties--above control level in 3 of 10 tobacco fields, larvae 0-625 per acre. (Gregory).

### POTATOES, TOMATOES, PEPPERS

### INSECTS

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - CALIFORNIA - San Joaquin County--adults and nymphs up to 10 per leaf (light to heavy) in 100 acres of tomatoes at Stockton. (Curtis). MISSOURI - Barton and Jasper Counties--heavy populations seriously damaged garden tomatoes, averaged 50+ per leaf. (Munson).

### **CUCURBITS**

### INSECTS

SQUASH BUG (Anasa tristis) - ARKANSAS - Crawford County--above treatment level in commercial squash fields. (Jones).

### **DECIDUOUS FRUITS AND NUTS**

### INSECTS

CODLING MOTH (Laspeyresia pomonella) - WASHINGTON - Chelan County-averaged 0.4 with high of 3 per pheromone trap in 70 traps week ending August 6. (Rushmore). IDAHO - Twin Falls County--76 adults trapped August 8-15 at Twin Falls. (Stoltz). Males in pheromone trap in Latah County: August 1-5--13, August 7--3, August 8--2, August 9--4, August 10--3, August 11--3, August 12-14--13, August 15--1, and August 16--1 at Moscow. (Portman). WISCONSIN - Columbia and Dodge Counties--adults still active, 3-4 in traps August 3-15. Winnebago County--worst infestation in apples in many years. (Lovett).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - PENNSYLVANIA - Adams County--averaged 75 adults per trap in 3 apple orchards at Biglerville August 17. (Kim).

APPLE-AND-THORN SKELETONIZER (Anthophila pariana) - OREGON - Marion County--several larval generations seriously skeletonized leaves of dooryard apples at Salem. Many trees in northeastern sector completely browned. (Penrose).

PEACH TWIG BORER (Anarsia lineatella) - OREGON - Polk County-second generation larvae general throughout ripening prunes in orchard. (Larson). IDAHO - Twin Falls County-first 2 adults of year trapped August 8-15 at Twin Falls. (Stoltz).

REDBANDED LEAFROLLER (<u>Argyrotaenia</u> <u>velutinana</u>) - PENNSYLVANIA - Central counties--third generation <u>adults</u> averaged 100 per pheromone trap as of August 17. (Tetrault).

PECAN WEEVIL (<u>Curculio caryae</u>) - ALABAMA - First adults for 1977 trapped August 1 in pecan orchards. (Estes).

### FOREST AND SHADE TREES

### DISEASES

WHITE PINE BLISTER RUST (<u>Cronartium ribicola</u>) - WISCONSIN - Northern area-<u>Ribes</u> heavily infected with telia, could indicate high potential for blister rust infection of pine if cool, wet weather continue. (Lovett).

### INSECTS

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - New county records. Marathon--in woods near Halder, August 3; Buffalo--on wayside near Fountain City, August 5; Jackson on wayside near Melrose, August 5; Portage--in woods near Bancroft, August 5; Trempealeau--in woods near Galesville, August 5; Waushara--in park in Mt. Morris, August 8; Adams--in woods near Adams, August 8; Marquette--in park near Endeavor, August 8; and Waupaca--on wayside near King August 10. All collected from pheromone traps by E. Arnold in 1977. Determined by J. Baker. (Lovett).

• TWOLINED CHESTNUT BORER (Agrilus bilineatus) - WISCONSIN - Dane, Sauk, and Columbia Counties--caused oak mortality in most instances. Increased mortality due to weakened condition of trees caused by 1976 drought and defoliation of CANKERWORMS. (Lovett).

WESTERN OAK LOOPER (Lambdina fiscellaria somniaria) - OREGON - West side of Willamette Valley from Rickreall, Polk County, north to Yamhill, Yamhill County--heavy local larval populations stripped leaves from Quercus garryana (Oregon oak). (Westcott).

FALL WEBWORM (<u>Hyphantria cunea</u>) - CALIFORNIA - Tulare County-defoliated 0-2% of walnut trees at Visalia. Damage expected to increase. (Hemphill, Hawkins). ARKANSAS - Northwestern area-pupation underway. Many relatively large persimmon and walnut trees almost completely defoliated. (Mayse).

MIMOSA WEBWORM (Homadaula anisocentra) - CALIFORNIA - New county record. Yuba County-adult on Albizia sp. at Marysville, by D. Kelsey, July 22, 1977. Determined by T. Richlin. (Kelsey, Richlin).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - ALABAMA - New county record. Perry County-infested catalpa at Union Town, March 22, 1977. Collected by W.O. Hairston. Determined by M.L. Williams. (McQueen).

### MAN AND ANIMALS

### DISEASES

ST. LOUIS ENCEPHALOMYELITIS (SLE) - OHIO - Nine positive seriological tests from sparrows and pigeons, for total of 12 for this season for Ohio. Eleven tests from juvenile birds, indicates active dispersal of disease has occurred. To date 1,778 serum tests made. Total of 25,650 mosquitoes tested for this virus: 16,502 Culex, 6,572 Aedes, and 2,576 specimens of other genera. (Parsons).

### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - OKLAHOMA - Noble County-averaged 2,000 per head on cattle. (Arnold). KANSAS - Franklin County--averaged 150-200 per head on range cattle. (Hilbert). NEBRASKA - Lincoln and Dawson Counties--remained stable on untreated cattle August 2, averaged 500+ per head. (Campbell). MISSISSIPPI - Oktibbeha, Lowndes, Noxubee, Kemper, Neshoba, and Winston Counties--adults averaged about 100 per head on cattle. (Anderson).

FACE FLY (<u>Musca autumnalis</u>) - MISSISSIPPI - Oktibbeha, Lowndes, Noxubee, Kemper, Neshoba, and Winston Counties--fewer than 4 adults per face on cattle. Heaviest counts averaged 3.7 per face on 40 head in Winston County. (Anderson). NEBRASKA - Lincoln and Dawson Counties--adults increased by 50%, averaged 15 per face on untreated cattle August 2. (Campbell). WISCONSIN - Averaged 3 per face on dairy cattle. (Lovett).

STABLE FLY ( $\underline{\text{Stomoxys}}$   $\underline{\text{calcitrans}}$ ) - NEBRASKA - Lincoln and Dawson Counties--adults averaged 10-15 per leg on untreated cattle. (Campbell). WISCONSIN - Brown County--averaged 3 per side on dairy cattle. (Lovett).

MOSQUITOES - MINNESOTA - Metropolitan Mosquito Control District light trap counts August 7-13 continued to rate Aedes vexans number one. Numbers of Culex tarsalis, known vector of WESTERN EQUINE ENCEPHALOMYELITIS, dropped from previous week. Daytime bite collections continue to rate A. vexans as number one; C. tarsalis and A. triseriatus, known vector of CALIFORNIA ENCEPHALOMYELITIS, sharply decreased from previous week. Larvae of C. tarsalis increased while A. vexans numbers dropped from previous week. (Sreenivasam). NEW HAMPSHIRE - New State record. Rockingham County--2 Aedes taeniorhynchus females collected in light trap at Seabrook, by K.I. Campbell, August 9, 1977. Determined by J.F. Burger and R.L. Blickle. Strafford County--Aedes sollicitans very heavy at Durham, and throughout seacoast region on August 13-14. Biting counts averaged 5-10 females per minute at Durham August 14. (J.F. Burger).

### STORED PRODUCTS

### INSECTS

INDIAN MEAL MOTH (<u>Plodia interpunctella</u>) - IOWA - Larvae damaged 1,000 bushels of soybeans in Cass County and corn in Shelby County week ending August 12. (J.R. DeWitt).

### BENEFICIAL ORGANISMS & THEIR ENEMIES

### INSECTS

AN APHIDIID WASP (Lysiphlebus testaceipes) - NEBRASKA - York, Clay, and Fillmore Counties--parasitism of Schizaphis graminum (greenbug) averaged 20% in sorghum surveyed August 1-2, greenbug will decline in these areas before reaching damaging levels. (Peters, Monke). Cuming County--parasitism averaged about 75% in 2 sorghum fields August 3. (Witkowski).

A MYMARID WASP (Anaphes flavipes) - NEW YORK - New county record. Niagara County--parasitism of Oulema melanopus (cereal leaf beetle) eggs on oats 50% in Lockport Township on June 8, 1977. Collected by P. Canington. Determined by R. Gaines. (T.L. Burger).

ALKALI BEE (Nomia melanderi) - WASHINGTON - Walla Walla County-peaked 14 days earlier than normal, July 15, at Touchet. Some beds only had 21 days of activity because of dry conditions with more bees nesting at deeper levels (12-14 inches) than normal. Best flight activity in at least 4 years. (Johansen).

### FEDERAL AND STATE PROGRAMS

### DISEASES

OAT STEM RUST (<u>Puccinia graminis</u> var. <u>avenae</u>) - NORTH DAKOTA - North-central and northwestern areas--increased significantly, prevalence/severity by county: Rolette--100%/30%, Pierce--100%/20%; Bottineau--100%/10%; Renville, Burke, Williams, and Mountrail--100%/5%. Northeastern and east-central areas--low test weights and estimated yield losses of up to 50% reported in late-seeded oat fields. (Jons).

WHEAT STEM RUST (<u>Puccinia graminis</u> var. <u>tritici</u>) - NORTH DAKOTA - Nelson County--trace amounts in late-seeded commercial field. (Jons).

### INSECTS

CEREAL LEAF BEETLE (<u>Oulema melanopus</u>) - OHIO - New county record. Lake County--larvae damaged 3 acres of 33-inch oats near Madison June 14, 1977, and 15 acres of 33-inch winter wheat near Perry June 15. Collected and determined by R.A. Endebrock and P. Kauffman. (Drees).

GRASSHOPPERS - KANSAS - Averages per sq yd by county: Jackson--4 along roadsides near Netawaka; and Brown--4 along crop borders near Everest. Mostly Melanoplus femurubrum, M. differentialis, and M. bivittatus. (Bell). SOUTH DAKOTA - Acres of rangeland infested with 8-30 adults per sq yd by county: Dewey--8,960, Fall River--76,800, Haakon--26,240, Meade--164,920, Shannon--25,600, Ziebach--32,000. (Winks et al.). NORTH DAKOTA - Economic acreage (8 or more grasshoppers per sq yd) on rangeland by county: Billings--3,840 acres, McKenzie--22,400 acres, Slope--3,500 acres. Ageneotettix deorum, Aulocara elliotti, Camnula pellucida, Melanoplus sanguinipes, and Trachyrhachys kiowa dominant. (Winks).

JAPANESE BEETLE (Popillia japonica) - WEST VIRGINIA - Ohio County-adult damage to corn silk spotty August 8. Heavy damage to ears at borders of 50% of fields. (Lippert).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Cullman County--adults 4-6 on most ragweed plants in 10-acre field, up to 6 adults under and around pumpkins in 5-acre field. Lee County--l adult per 10 ft of row in soybeans in 1 field. (Baswell et al.).

### DETECTION

NEW STATE RECORDS

### INSECTS

A MOSQUITO ( $\underline{\text{Aedes}}$  taeniorhynchus) - NEW HAMPSHIRE - Rockingham County. (p.  $\overline{674}$ ).

NEW COUNTY AND ISLAND RECORDS

### INSECTS

CEREAL LEAF BEETLE (Oulema melanoplus) - OHIO - Lake. (p. 675).

MIMOSA WEBWORM (<u>Homadaula</u> <u>anisocentra</u>) - CALIFORNIA - Yuba. (p. 673).

A MYMARID WASP (Anaphes flavipes) - NEW YORK - Niagara. (p. 675).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - Marathon, Buffalo, Jackson, Portage, Trempealeau, Waushara, Adams, Marquette, Waupaca. (p. 673).

A SPHINGID MOTH (Macroglossum pyrrhostictum) - HAWAII - Maui. (p. 671).

WESTERN CORN ROOTWORM (<u>Diabrotica virgifera</u>) - ILLINOIS - Franklin, Richland. INDIANA - Union, Franklin, Ripley, Dearborn. OHIO - Ashland. (p. 664-665).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - ALABAMA - Perry. (p. 673).

### CORRECTIONS

CPPR 2(24):424 - KENTUCKY - Spodoptera frugiperda (fall armyworm) 1 ... should be S. ornithogalli (yellowstriped armyworm) 1. (Sloderbeck).

CPPR 2(30):572 - GYPSY MOTH - Total defoliation is 1,275,420 ... should read <u>Total defoliation is 1,296,550</u> ... (Nichols).

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# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

Desti- nation	NY	AK	TX	CA	CA	CA	USA	XX
Port of Entry	Kennedy Airport	Anchorage	Kennedy Airport	Los Angeles	San Francisco	San Francisco	Seattle	Houston
Probable Origin	Dominican Republic	Australia	Europe	Republic of China	Hawaii	Japan	Asia	0 Cheece
Host	on Ficus leaves from baggage	on tangerines from cargo	in peaches from baggage	in mangoes from baggage	in ammuni- tion crates	with cargo of lily bulbs	in hold of military aircraft	on vans of military house. hold goods
Life Stage	uredial	imperfect	larval	larval	all	adult	adult	adult
	Cerotelium fici (Butl.) Arth. a rust Det. H.T. Eng	Guignardia citricarpa Kiely black spot of citrus Det. F.G. Pollack	Ceratitis capitata (Wiedemann)  Mediterranean fruit fly Det. D.M. Odermatt	Cryptophlebia ombrodelta (Lower) an olethreutid moth Det. D.M. Weisman	Cryptotermes brevis (Walker) a termite Det. R. Munkittrick	Frankliniella <u>lilivora</u> Kurasawa a thrips Det. R. Munkittrick	Spodoptera pecten (Guenee) a noctuid moth Det. D.M. Pike	Otala vermiculata (Múller) a helicid snail Det. R. Munkittrick

PESTS NOT KNOWN TO OCCUR IN THE UNITED STATES
Or
Of Limited Distribution . 2

A WEEVIL

Baris lepidii Germar Coleoptera: Curculionidae

### ECONOMIC IMPORTANCE

This pest is of economic importance according to Sorauer (1928-1932) but is little discussed in other economic references. Shipments from central Europe show that horseradish from this area is generally infested, and that this is a seriously damaging pest of horseradish.

### DISTRIBUTION

Central and southern Europe. Austria, Czechoslovakia, France, Germany, Great Britain, Hungary, Italy, Poland, Romania, USSR, and Yugoslavia are cited in the literature. Larvae and adults have been intercepted many times in horseradish and turnip from Algeria, Czechoslovakia, Poland, and USSR. Detected in the United States (Illinois) in June 1977 but infestation believed to be present since 1973.

### HOSTS

B. lepidii feeds on members of Brassicaceae (crucifers).

Reported on Armoracia rusticana (horseradish), Barbarea
vulgaris (yellow rocket), Brassica oleracea [Capitata Group]
(cabbage), B. oleracea [Botrytis Group] (cauliflower), B. napus
(rape), B. rapa [Rapifera Group] (turnip), Lepidium latifolium
(perennial pepperweed), Nasturtium officinale (watercress),
and Sinapis alba (white mustard).

### CHARACTERS

It is very difficult to separate species of this group. The following is a description of <u>Baris</u> as a group. These are small insects 4-6 mm long, very elongated, shiny blue-black or greenish blue, characterized by their very long rostrums. North American Baris are shiny black not having a blue or green coloration.

ADULTS - Antennal club short, oval or conical, more or less pointed, never as long as the preceding six joints united; basal joint subglabrous and polished and making up more than half its mass; fifth ventral abdominal segment shorter than third and fourth combined, subtruncate, pygidium usually nearly vertical; males nearly always with a distinct impression at middle of abdomen towards base; tarsal claws free and more or less divergent; second joint of funicle short, not twice as long as wide; front coxae not separated by a distance equaling their own width; form oval or oblong-oval, robust; surface usually shining and almost glabrous; head minutely alutaceous, very finely and



GENERAL DISTRIBUTION OF BARIS LEPIDII GERMAN

remotely punctate; beak stout, curved, not longer than thorax, separated from the head by a shallow impression; legs short, tibiae strongly mucronate at tip and more or less strongly carinate and grooved along the sides (Blatchley 1916).

<u>Diagnosis</u>: The diagnosis given here distinguishes adults of <u>B. lepidii</u> from all other weevils known to occur in the continental United States. Part A traces the weevil to subfamily Baridinae; part B to genus <u>Baris</u>; and part C to <u>B. lepidii</u>. Characteristics used in parts A and B were abstracted from keys found in recent literature. Some other Old World crucifer-eating <u>Baris</u> species are more similar to <u>B. lepidii</u> than are our native species; <u>B</u>. lepidii is <u>distinguished</u> from them in part D.

Part A. Antenna elbowed, scape not extended beyond front margin of eye, funicle with 7 segments, first club segment pubescent. Mandible glabrous, without conspicuous scales or long setae, without deciduous cusp or attachment scape. Trochanter short and triangular. Beak free, not received in deep sternal channel. Mesepimeron strongly ascending between elytral humerus and base of pronotum. Elytra not produced over base of pronotum.

Part B. Dorsal surface of body with minute hairlike scales only, without conspicuous broad scales. Beak separated from rest of head by distinct dorsal groove. Tarsus with 2 claws; claws clearly separated at base. Hind tibia with conspicuous spine (uncus) at apex. Front coxae separated by distance much less than diameter of coxa. Prosternum

without deep median sulcus in front of coxae. Pygidium (last visible abdominal tergite) exposed, not fully covered by elytra.

Part C. <u>B. lepidii</u>, length 2.5-4.0 mm, differs from all native species in <u>each</u> of the following ways. Body more slender and elongated. Mesepimera not visible in dorsal view (in native species, tips of mesepimera are visible in dorsal view between elytral shoulder and base of pronotum). Color distinctly bluish, at least in most specimens (coloration of native species either completely unmetallic or distinctly aeneous, not bluish). Host plants are crucifers (host plants of native species are composites).

Part D. Several other Old World <u>Baris</u> species attack various crucifer crops; among those with characteristics mentioned in part C, <u>B. lepidii</u> is distinguished by the following. Punctures on sides of prothorax large, oblong, confluent, forming longitudinal ridges. Elytra distinctly widened behind base, without prominent humeral callus. Pronotum with impunctate median line. (Courtesy of D.R. Whitehead)

 $\rm EGGS$  - Typically soft, greyish white, length .70 mm; width 0.50 mm.

LARVAE - Typical curculionid type (soft, C-shaped, legless), about 5-6 mm long when fully grown. Body only moderately curved, stout, whitish; usually rather small larvae. Head free, usually yellowish brown, often with a pair of pale stripes in front. Frontal sutures incomplete. Accessory appendage of antenna longer than broad. Spiracles biforous, the air tubes fairly long, epipharynx with dark, subparallel labral rods, 3 dorsal folds on most abdominal segments, in this genus.

Frontal branches of epicranial sutures extended as straight, whitish lines convergent on coronal suture near vertex; coronal suture extended beyond apex of front to a point about halfway from the base. Front lyre-shaped.

# Important points in diagnosis:

Head - Light yellowish brown, with a white (unpigmented) stripe on each side of epicranial suture (as illustrated). Setae distributed as illustrated, 5 pairs on head capsule (epicranium) with another 5 pairs on subtriangular frons. Mandible dark brown with 2 apical teeth. Maxilla with 3 setae, as illustrated, on stipes. Maxillary palpi are 2-segmented, and labial palpi are also 2-segmented. Labium with trident-shaped sclerite, as illustrated, and also has 6 pairs of setae, arranged as illustrated.

Body - White, soft except for light yellowish plate on prothorax, subcylindrical and elongate, as in photo. First 7 abdominal segments subdivided into 3 dorsal folds. Some sparse setae visible but not conspicuous. Setae are arranged in a single row on some dorsal abdominal folds. Spiracles



Epicranium of the larva anterior view



Maxilla and labium of the larva ventral view



Right mandible of the larva dorsal view



Labrum of the larva dorsal view

(Illustrations from Scherf 1964 modified by D.M. Anderson)

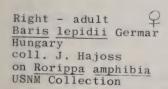


Left - larva

Baris lepidii Germar

Intercepted at New York, NY
5/2/37 No. 71087

Reared from horseradish
USNM Collection





(Photographs by D.M. Anderson)

(visible under light magnification) have 2 annulated air tubes which project posteriorly.

Size - Length up to 5 mm (Courtesy of D.M. Anderson).

PUPAE - White, length 2-3 mm.

### CHARACTERISTIC DAMAGE

The larvae tunnel in roots and stems, causing dark lesions or galling in the stems of host plants. There is very little external evidence of infestation by the larvae of  $\underline{B}$ .  $\underline{lepidii}$  in horseradish roots. The young larvae feed in meandering tunnels just below the surface of the epidermis (3-9 mm in depth). As the larvae grow, they feed deeper into the plant tissue and the tunnels are less meandering.

### DETECTION NOTES

- 1. The adults of <u>Baris</u> species are usually taken in sweeping low moist meadows.
- 3. In checking horseradish roots, extreme care must be taken to remove the outside surface in thin sections in order to detect the inconspicuous and concolorous larval feeding tunnels. When a feeding tunnel is located, the plant tissue should be carefully removed from the sides of the tunnel until the specimen is found. The fully grown larva or pupa is usually found at a depth of about 2 cm. Most of the larval feeding is concentrated in the first 17 cm below the root crown but may be found anywhere in the root. Extreme care, good light, and a sharp knife are necessary if specimens of this pest are to be found as they can easily be overlooked.

### **BIOLOGY**

Larvae of this genus are responsible for the principal damage caused to food plants by the several species, the adults being of secondary or little importance. Oviposition occurs in the roots or stems of the host plant, the point of oviposition differing with some species. The larvae tunnel the roots or stems and pupate in the tunnels. The adults usually hibernate in the soil. Both larvae and pupae of some species overwinter in the larval tunnels of the host, as do a few adults.

B. lepidii - The females oviposit in the tissues of the leaf stems or root crown. In Germany, eggs hatch in 8-14 days. In eastern Poland the period of oviposition begins in May and continues to the end of June. The larvae begin to pupate in late July and early August. Larvae mine the roots and stems and pupation takes place in the larval mines. The period for pupation lasts 12-18 days. The larvae form galls on the stems of cabbage where they develop into pupae and adults. No galls have been observed on horseradish. One author states that the larvae and adults exist in the stalks of cauliflower. It is believed that

the adults overwinter in plant debris, shoots of host plants, or the soil. There is one generation a year.

Natural Enemies: In France a hymenopterous wasp <u>Bracon glaphyrus</u> Marsh. has been found parasitizing <u>Baris</u> spp. infesting cauliflower growing in light soils (Bonnemasion 1953).

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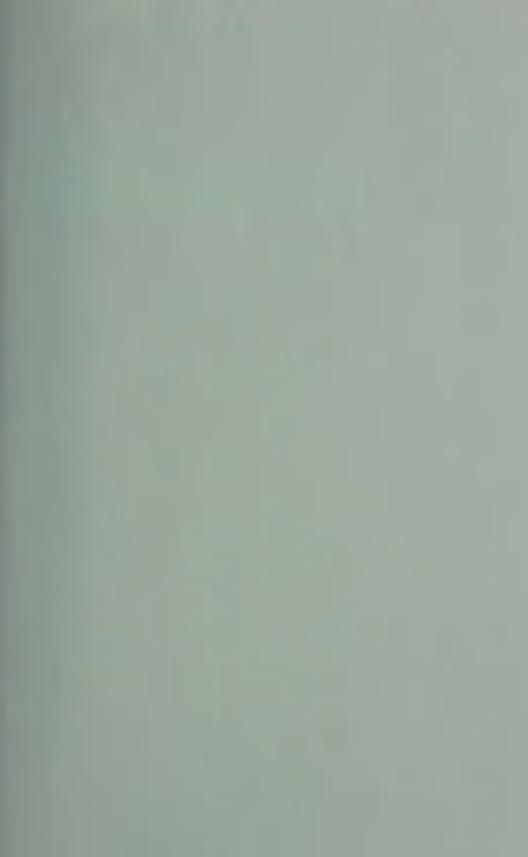
Prepared by New Pest Detection and Survey Staff with special thanks to Drs. D.M. Anderson and D.R. Whitehead, Systematic Entomology Laboratory, IIBIII, ARS, USDA.

U.S. Dep. Agric. Coop. Plant Pest Rep. 2(34):680-685, 1977

No. 2 of Series







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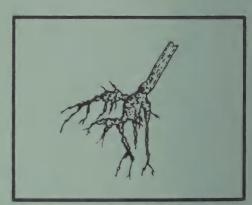
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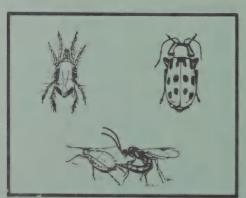
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VOL. 2 No. 35

Reserve 258823 , U53

September 2, 1977

# Cooperative PLANT PEST REPORT







U.S. DEPARTMENT OF AGRICULTURE





This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49-52, 1975.

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#### **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

#### Current Conditions

FALL ARMYWORM and CORN EARWORM heavy on corn in northern Alabama; major problem with fall armyworm on grain sorghum in southern and central areas. Fall armyworm and others caused heavy widespread damage in South Carolina to sorghum (p. 694), small grains, grasses (p. 696), and forage legumes (p. 697).

Corn earworm infested blooms and pods of soybeans in South Carolina, above control levels in parts of Tennessee and Maryland, and still a major problem on blooming and pod-developing soybeans in eastern Virginia. (p. 689-690). Fall armyworm, corn earworm, and others damaged up to half of soybean acreage in Alabama. Fall armyworm increasing in South Carolina. (p. 700).

Fall armyworm severe on peanuts (p. 700) and predominant pest of cotton in Alabama. Cotton bolls damaged by fall armyworm, and leaves by BEET ARMYWORM in parts of South Carolina. (p. 702).

GREENBUG 200 or more per sorghum plant in parts of New Mexico, Colorado, and Texas. (p. 690).

COMMON MAIZE RUST prevalence 20% and higher on corn in blister to few-kernels-dented stages in central area of Illinois, south-central and southeastern areas of Michigan, and central area of Minnesota. (p. 691).

Adult CORN ROOTWORMS 1+ per corn plant in 5 southern districts of Wisconsin during August survey. (p. 695).

#### Detection

A NOCTUID MOTH found in Hawaii is new for the Western Hemisphere. (p. 707).

New State records include SOIL-BORNE WHEAT MOSAIC VIRUS and WHEAT STREAK MOSAIC VIRUS in Kentucky (p. 696), a MOSQUITO in New Hampshire, a MINUTE EGG PARASITE in Virginia and West Virginia, and a EULOPHID WASP in Virginia (p. 706). New WHITEFLY in Puerto Rico. (p. 708).

For new county, island, and independent city records, see pages 708-709.

Reports in this issue are for the week ending August 26 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### DISEASES

CURLY TOP VIRUS - CALIFORNIA - Stanislaus County--tomatoes show 1.3% damage at Crows Landing and infected 40% of 30-acre sugar beet field. (Hawkins).

#### INSECTS

BEET LEAFHOPPER (<u>Circulifer tenellus</u>) - CALIFORNIA - Stanislaus County--averaged  $\overline{30}$  per  $\overline{10}$  sweeps in sugar beet field. Field treated. (Tyson). COLORADO - Counts per  $\overline{100}$  sweeps July 20-26; Arkansas Valley--25-200 on sugar beets (Schewissing), Otero and Pueblo Counties--5-100 on tomatoes (Fronk).

CORN EARWORM (Heliothis zea) - CALIFORNIA - Merced County--small larvae on 10% of 53-acre tomato field at Merced; field treated. (Stombler). NEW MEXICO - Chaves County--infested 90+% of corn ears at Roswell week ending August 19. (Riddle). Currently: Curry, Roosevelt, Eddy, and Chaves Counties--almost all ears infested, some tassel damage; Roosevelt County--averaged 1 per whorl on late milo near Portales. (Iselin). TEXAS - Hemphill County--infested 75% of sorghum plants August 16. (Patrick). Pecos and Reeves Counties--larvae per 50 sweeps of alfalfa up to 185 on August 12 and 0-33 on August 19. (Foster).

KANSAS - Corn earworm larvae feeding in heads of midbloom to dough stage sorghum by county: Harvey--0.2-1.8 (6 fields), Butler--0-0.8 (2 fields), Cowley--0.6 (1 field), Sedgwick--0-0.2 (2 fields), and Sumner--0.7 (1 field); all larval stages, small larvae predominant. (Bell). Larvae per row ft of late-blooming soybeans by county (1 field each): Cowley--averaged 0.2 and Butler--0.1. Adult flights substantial at most blacklight trap areas, unusually heavy flight (about 1,296 adults trapped) near Hugoton August 19. (Bell).

NEBRASKA - Panhandle area--corn earworm common in scattered corn fields in Banner, Box Butte, and Morrill Counties. Infested 1-2% in about 20 of 75 fields (Marquardt); southwest district--similar infestations in Lincoln, Hayes, Furnas, and Dundy Counties (Campbell). WISCONSIN - Intense adult activity continued at several sites despite very cool nighttime temperatures. Rains made keeping sprays on sweet corn difficult, but no significant infestation so far. Adults likely to occur well into October. (Lovett).

MISSISSIPPI - Clay, Lowndes, Noxubee, and Oktibbeha Counties—corn earworm larvae 0-19 (averaged 3.8) per 25 sweeps in pod set stage soybeans. All larval stages with majority being 3rd instar. Pod damage undetermined. (Anderson). FLORIDA - Alachua and Levy Counties—corn earworm and FALL ARMYWORM (Spodoptera frugiperda), and VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) buildup slower and later than in 1976 on soybeans; only 10% of 3,000 acres needed treatment. Corn earworm feeding on pods in 60 acres of soybeans near Gainesville, Alachua County. (Baker). In these 2 counties, 10% of 2,000 peanut acres needed treatment for corn earworm and S. frugiperda. Jackson County—all 3 species below economic thresholds on soybeans. (Linker). SOUTH CAROLINA - Statewide—corn earworm frequent pest of soybeans since August 1. Infestations

often heavy, corn earworm larvae often infested blooms or developing pods. Larvae 20 per ft row in 30-acre Dillon County field. (Douglass, Moody). TENNESSEE - Corn earworm in western and middle areas--above control levels on about 1% of 50,000+ acres of soybeans in 32 counties, 4 counties had about 5% of fields above control levels. Old pod damage in many fields. Larvae primarily in tender beans just beginning to fill. Dead diseased larvae in middle of fields where pod damage old. Over 90% of larvae in last instar. (Gordon). Acres damaged (and treated) by county: Davidson--500 (0) on corn, Hardeman--1,000 (1,000) on soybeans, Houston--900 (100) on corn, Johnson--500 (0) on corn, Lake--20,000 (25,000) on soybeans and 4,000 (4,000) on cotton, Macon--500 (0) on corn, Marion--3,000 (0) on corn, Maury--1,000 (200) on corn, and Monroe--half of total corn crop (0). Acres damaged by corn earworm and Spodoptera frugiperda (and acreage treated) by county: Obion--15,000 (10,000) on soybeans; Sequatchie--800 (650) on corn and 200 (100) on grain sorghum; Tipton--5,000 (3,000) on cotton, 2,500 (1,000) on soybeans, and 25 (5) on Sudex. (Knight et al.).

WEST VIRGINIA - Pocahontas, Pendleton, and Randolph Counties-corn earworm infested less than 10% of ears of field corn.

(Hacker). MARYLAND - Somerset, Worcester, and Wicomico Counties-ratio of 45 corn earworm: 4 S. frugiperda: 1 BEET ARMYWORM

(Spodoptera exigua) in economic outbreaks on such late maturing varieties of soybeans as Essex, York, and Shore. Infested 60% of acreage, about half above economic threshold. Larvae up to 10 per row ft, averaged 1. Losses up to 80% in worst fields, these fields between flowering and pod forming stages. Charles County-corn earworm at heavy levels on flowering tobacco, some fields 100% infested; nonflowering plants less than 1% infested.

(Hellman, Pinto).

VIRGINIA - Eastern area--corn earworm still major insect problem on soybeans. Larvae up to 26, commonly 10-12 per 3 row ft in fields with blooms and young developing pods (most susceptible) from Mathews County to Westmoreland County. Larvae newly hatched to 1.5 inches long. Adults still heavy in fields. Problem expected until frost. Some Northumberland County fields treated 3 times. (Allen).

GREENBUG (Schizaphis graminum) - NEW MEXICO - Curry County--colony counts up to 200 per sorghum sheath near Grier week ending August 19. (Riddle). COLORADO - Arkansas Valley--generally light or absent on sorghum except for few fields in Crowley County where counts 10-1,000 per plant with accompanying damage August 10-16. (Schweissing). TEXAS - Counts on sorghum by county August 9-16: Hale--10-99% parasitism; Castro and Lamb--5-15% mummies; Gray and Roberts--2 dead leaves on resistant plants, parasitism less than 2%; Panhandle area--15-20% mummies. (Cronholm et al.). Maximum greenbugs per plant (and parasitism) by county August 9-18: Randall--4,500 (70%), Swisher--4,000 (25%), Briscoe--3,000 (10%), Motley--20 (30%) in dryland, Floyd--3,000 (10%), Hale--700 (15%), Oldham 500 (15%), Deaf Smith--2,000 (30%), Castro--4,000 (50%), Parmer--500 (15%), Potter--2,000 (30%), Hutchinson--0, Hansford--10 (60%), Ochiltree--0, Sherman--5 (100%), and Moore--20 (100%).

POTATO LEAFHOPPER (Empoasca fabae) - PENNSYLVANIA - Erie County-damage averaged about 13% in 6 grape vineyards. (Jubb). OHIO - Butler County--1.7 per sweep in 1 soybean field. Scioto and Brown Counties--counts lighter. (Drees).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Arkansas Valley--0-20 per 100 sweeps of potatoes and 0-10 in tomatoes July 13-19. Pueblo County--0-30 per 100 sweeps of tomatoes July 20-26. (Schweissing). San Louis Valley--serious in many potato fields, 0-15 nymphs per plant and 0-50 adults per 50 sweeps August 3-9. (Nelson). Arkansas Valley--0-20 per 100 sweeps in most tomato fields August 10-16. (Schweissing).

SPOTTED ALFALFA APHID (Therioaphis maculata) - CALIFORNIA - Fresno County--alates 10 per 50 sweeps on alfalfa at Mendota. (Dunnegan). COLORADO - Arkansas Valley--appeared on alfalfa, 0-1,000 per 100 sweeps August 10-16. (Schweissing).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Central and east-central areas--prevalent in most corn fields. Prevalence 70-100% in all fields surveyed in Dickinson, Saline, McPherson, Marion, and Geary Counties. (Sim). MISSOURI - Prevalence in corn plants by county August 16-18: Holt--90%, Atchison--25%. Affected leaf area less than 0.5% except in Holt County (1%). (Foudin).

ILLINOIS - Common maize rust prevalence/severity on commercial field corn (and growth stage) by county August 18-19: De Witt-30%/1% (few kernels dented), Logan-40%/1-5% (all kernels dented), Mason-5%/1% (all kernels dented), Hancock--12%/1% (all kernels dented), Adams--10%/1% (all kernels dented), Morgan--6%/1% (all kernels dented), Greene-5%/1% (all kernels dented), Macoupin-20%/1% (all kernels dented). (Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 9%/severity 2% in corn (all kernels dented). (Schall). OHIO - Prevalence/severity (and growth stage) by county, 1 corn field each, week ending August 19. Clark--100%/1-5% (all kernels dented), Hancock--100%/1-10% (all kernels dented), Logan--25%/trace (all kernels dented), Williams--1%/trace (few kernels dented). (Hite).

MICHIGAN - Common maize rust prevalence/severity in corn plants (and growth stage) by county week ending August 12: Calhoun--20%/10% (soft dough), Genesee--5%/40% (few kernels dented), Jackson--70%/5% restricted to first 2 lower leaves (kernels blistered), Sanilac--trace/trace (soft dough), Wayne 65%/2% (soft dough). (Singh). MINNESOTA - Clay, Lac Qui Parle, Lincoln, Murray, Pipestone, Pope, Renville, Sibley, Swift, Traverse, Wilkin, and Yellow Medicine Counties--prevalence 100%/severity 5-20% of leaf surface (all kernels dented) in dent corn fields. Renville County--prevalence 100%/severity reached 30% in 1 sweet corn field (kernels blistered). (Stromberg).

SORGHUM LEAF RUST (<u>Puccinia purpurea</u>) - KANSAS - Morris County-found for first time in 1977 in 2 sorghum fields; prevalence about 5% in 1 grain sorghum field and 100% in 1 forage sorghum field. (Sim).

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - OHIO - Clinton County--prevalence 100% severity trace to 5% (all kernels dented) week ending August 19. (Hite). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 21%/severity 5% in corn (all kernels dented). (Schall).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity on commercial field corn (and growth stage) by county August 18-19: Piatt--10%/15% (all kernels dented), De Witt--14%/10-20% (few kernels dented), Adams--12%/30% (all kernels dented), Morgan--15%/20% (all kernels dented), Macoupin--6%/10% (all kernels dented). (Jordan).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 4%/severity 0% in corn (all kernels dented). (Schall).

COMMON SMUT (<u>Ustilago maydis</u>) - ILLINOIS - Prevalence on commercial field corn (and growth stage) by county August 18-19: Piatt--8% (all kernels dented), De Witt--3% (few kernels dented), Logan--5% (all kernels dented), Mason--18% (all kernels dented), Hancock--9% (all kernels dented), Adams--2% (all kernels dented), Morgan--10% (all kernels dented), Greene--8% (all kernels dented), Macoupin--4% (all kernels dented). (Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 3%, maximum prevalence 14% in corn (all kernels dented). (Schall). OHIO - Prevalence (and growth stage) in 1 corn field for each county week ending August 19. Clark--1% (all kernels dented), Clinton--8% (few kernels dented), Franklin--10% (all kernels dented), Hancock--10% (all kernels dented), Logan--5% (all kernels dented), Madison--5% (all kernels dented), Mercer--1% (all kernels dented), Preble--2% (all kernels dented), Ross--trace (few kernels dented), Wood--2% (soft dough). (Hite).

KANSAS - Dickinson County--common smut affected 10% of corn plants in field. (Sim). MISSOURI - Prevalence in corn plants by county August 16-18: Lewis--3%; Holt--1-2%; and Schuyler, Atchison, and Putnam--trace. (Foudin).

MICHIGAN - Common smut prevalence/severity in corn plants (and growth stage) by county week ending August 12: Calhoun--20%/10% (soft dough), Genesee--trace/trace (few kernels dented), St. Clair--5%/100% (soft dough). (Singh). MINNESOTA - Clay, Lac Qui Parle, Lincoln, Murray, Pipestone, Pope, Renville, Sibley, Swift, Traverse, Wilkin, and Yellow Medicine Counties--prevalence trace to 10% in all dent corn fields surveyed (all kernels dented). (Stromberg).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - ILLINOIS - Prevalence/severity on commercial field corn (and growth stage) by county August 18-19: Piatt--33%/25% (all kernels dented), De Witt--22%/10-50% (few kernels dented), Logan--20%/15% 20% (all kernels dented). (Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 1% severity 0% in corn (all kernels dented). (Schall).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Miami County-prevalence 88% and 100% in 2 corn fields, lodging about 5%. (Sim).

FUJIKUROI ROT (Gibberella fujikuroi) - ILLINOIS - Prevalence of ear rot in commercial field corn (all kernels dented) by county August 18-19: Piatt-5%, Mason-4%, Hancock-6%, Adams-5%, Morgan-3%, Greene-3%, Macoupin-2%. Prevalence of stalk rot in commercial field corn (all kernels dented) by county August 18-19: Hancock-3%, Morgan-2%, Greene-4%. (Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties-average prevalence of ear rots by this species and other fungi 4% in corn (all kernels dented). (Schall).

ROTS - MISSOURI - Prevalence of Gibberella sp., Penicillium, and Fusarium sp. ear rots by county August 16-18: Harrison-20% and De Kalb--up to 5%. Greater-than-normal incidence of ear rot due to injury of immature ears by grasshoppers. (Foudin). ILLINOIS - Prevalence of Penicillium spp. ear rots in commercial field corn (all kernels dented) by county August 18-19: Greene-2% and Morgan--1%. (Jordan). MINNESOTA - Wilkin County--prevalence of Fusarium spp. stalk rot 30% in 1 corn field reaching maturity. Field had high amounts of corn borer damage. (Stromberg).

MAYDIS CORNSTALK ROT (Diplodia maydis) - ILLINOIS - Western area-prevalence 4% of field corn (all kernels dented). Pycnidia on lower internodes. (Jordan).

STEWART'S WILT (Erwinia stewartii) - MISSOURI - Prevalence/
severity in corn plants by county August 16-18: Lewis--90%/5-25%;
Atchison--75%/10%; Putnam--25%/trace to 5%; Harrison, De Kalb,
Schuyler--trace. Symptoms resembling this disease in 75% of plants
(5-15% leaf area affected) in Clark County. (Foudin). ILLINOIS Greene County--prevalence 20% in 1 field of commercial field corn
(all kernels dented) August 18-19. Damage to leaf surface 10-30%.
(Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess,
Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and
Boone Counties--average prevalence 13%/severity 2% in corn (all kernels dented). (Schall).

SORGHUM BACTERIAL STREAK (Xanthomonas holcicola) - KANSAS - Prevalence in sorghum plants by county: Shawnee--80%; Morris, Dickinson, Butler, and Marion--trace. (Sim).

BACTERIAL STRIPE (Pseudomonas andropogonis) - OHIO - Scioto County--prevalence  $\overline{100\%/\text{severity}}$   $\overline{10-15\%}$  in corn (all kernels dented) week ending August 19. (Hite).

MAIZE DWARF MOSAIC VIRUS (MDMV) - OHIO - Prevalence (and growth stage of corn) by county, 1 corn field each, week ending August 19: Franklin--10% (all kernels dented) and 75% (few kernels dented), and Madison--10% (all kernels dented). (Hite). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 1%/severity 1% in corn (all kernels dented). (Schall). MINNESOTA - Pope, Renville, and Yellow Medicine Counties--MDMV-like symptoms in trace to 5% of dent corn fields. One late-planted dent corn field in Wright County had 70% of plants showing virus-like symptoms. Clay County--100% infection in 2 sweet corn fields outside of Moorhead, severe stunting and mosaic leaf pattern. Many plants did not have ears or had ears with fewer kernels. Plants in dough stage. Almost 90% infection in sweet corn field in blister stage. (Stromberg).

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KENTUCKY - Purchase Region--larval damage evident on 60+% of corn. Larvae ranged 0-500 per 100 plants, heaviest in late-planted corn. Larval damage caused 5.2% of stalks to break above the ear, 1.6% to break below ear, and 0.6% of ears to fall on ground. All percentages will increase before harvest. (Sloderbeck). ILLINOIS - Second generation adult flight heavy in southern half of State. (Black). OHIO - Butler and Warren Counties--full-grown larvae infested about 70% of corn plants. Clermont, Brown, and Pike Counties--infestations lighter. (Drees).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - TEXAS - Counts on sorghum by county August 9-19: Hale--adults peaked, 5-30% eggs August 12, adults 5-15 per trap per night, eggs 1-10% August 19; Castro and Lamb--15-20% pupated, 3-4% emerged, girdling in few fields. (Cronholm, Moore). MISSOURI - Pemiscot County--girdled 7-8% of corn plants. (Barry).

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Cowley County-larvae, 0.75-inch long, infested 26% of whorls of 18-inch sorghum in 1 field. (Bell). ALABAMA - Northern area-fall armyworm and CORN EARWORM (Heliothis zea) heavy in thousands of acres of maturing corn. Jackson and other counties-yields reduced by drought to about 40% but now completely destroyed by larvae. (McQueen). Southern and central areas-fall armyworm still major problem on grain sorghum. (Yates et al.).

SOUTH CAROLINA - Statewide--heavy infestations by fall armyworm, BEET ARMYWORM (Spodoptera exigua), and CORN EARWORM (Heliothis zea) caused heavy and widespread damage to sorghum. Newberry County-larvae too heavy to count, all instars in many fields across county. (Douglass, Eaton). TENNESSEE - Acres damaged (and treated) by fall armyworm in each county: Davidson--500 (100) on corn and 300 (50) on sorghum, Franklin--100 (40) on corn and 50 (0) on sorghum, Houston--200 (100) on corn, Johnson--60 (0) on corn, Macon--slight (0) on corn, Marion--2,000 (0) on corn, Maury--2,000 (450) on corn, Monroe--600 (400) on corn, Rhea--400 (50) on corn, Roane--90 (70) on corn, and Union--25 (5) on corn. (Carr et al.).

WEST VIRGINIA - Wayne County--fall armyworm larval damage heavy to 25 acres of field corn. (Hacker). OHIO - Pike County--ear and stalk damage heavy in late-planted corn field. Frass at tunnel openings at tip or base of ears on 30+% of ears. (Drees).

VARIEGATED CUTWORM (Peridroma saucia) - COLORADO - Weld County-larvae 2-15 per sq ft, damaged silks and ear tips August 10-16. (Urano).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - COLORADO - Baca County--egg masses in 10-23% of corn plants; some beginning to hatch July 20-26. (Schweissing). KANSAS - New county record. Pawnee County--2 adults taken in blacklight trap near Zook by O. Schartz, July 19, 1977. Determined by K.O. Bell. Larvae light in corn field in this county near Larned, July 27. Collected and determined by D.E. Mock. (Bell). NEBRASKA - Lincoln, Hayes, Furnas, and Dundy Counties--scattered economic infestations in corn. Larvae one-fourth to fully grown. Many fully grown larvae left corn ears to enter soil. (Campbell).

CORN ROOTWORMS (Diabrotica spp.) - COLORADO - Bent, Otero, and Larimer Counties—WESTERN CORN ROOTWORM (D. virgifera) adults 1-15 per plant in few corn fields July 20-21; some silks destroyed. (Schweissing, Capinera). WISCONSIN - Grant County—Diabrotica spp. adults 50-60 per plant on late, untreated sweet corn. Egg laying past peak. Statewide adult survey in August averaged 1.2 per plant (averaged 1.9 in 1976 and 1.3 in past 5 years). Averages per plant by district: Northwest—0.2, north—central—0.0, northeast—0.3, west—central—1.1, central—0.7, east—central—2.2, south—west—1.2, south—central—2.1, and southeast—5.1 (5-year average of 1.9). (Lovett). INDIANA - Tippecanoe County—male to female catch in 10 sticky traps in corn field August 28: NORTHERN CORN ROOTWORM (D. longicornis) 532:287 and D. virgifera 230:229. (Meyer).
WEST VIRGINIA - New D. longicornis county records. Ohio County—swept (host not given) at Wheeling by G. Lippert, August 29, 1975. Marshall County—collected in corn silk at Limestone, by J.D. Hacker, August 18, 1977. Both determined by J.D. Hacker. (Hacker).

SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Baylor and Knox Counties--mean of 0.5-1 per sorghum head August 15. (Boring). ARKANSAS - Greene County--up to 5 per head on blooming sorghum plants. (Mayse, Kimbrough).

CHINCH BUG (<u>Blissus</u> <u>leucopterus</u> <u>leucopterus</u>) - KANSAS - Southeastern Harvey and northeastern Sedgwick Counties--all stages on sorghum. Larger nymphs and adults predominant. Mostly on stalks and undersides of leaves but commonly ranged 10-25 bugs on heads. (Bell).

BANKS GRASS MITE (Oligonychus pratensis) - NEW MEXICO - Pecos Valley, Eddy, and Chaves Counties--increased on corn week ending August 19. Early controls appeared effective, but some fields with heavy populations not responding to treatment. (Staff). COLORADO - Pueblo, Crowley, Otero, Bent, and Prowers Counties--light on lower 2-4 leaves with some yellowing next to midrib in all fields checked July 13-19. In Pueblo County some populations reached

seventh to eighth leaf with more yellowing but no leaf destruction. Banks grass mite populations reached twelfth to thirteenth leaf on corn. Burning evident on lower leaves of severely infested fields July 20-26. Counts heavier in Pueblo County and decreased towards Kansas border. Lower infestations (third to fifth leaf) associated with late-planted fields. Lower Arkansas Valley-light to heavy in 5-county area, severe burning of middle and upper leaves in heavier infestations August 10-16. (Schweissing).

#### **SMALL GRAINS**

#### DISEASES

SOIL-BORNE WHEAT MOSAIC VIRUS - KENTUCKY - New State record. Franklin County--prevalence 1-5% throughout 1 soft red winter wheat field near Frankfort. Collected by R.F. Stuckey, April 26, 1977. Determined with electron microscope by T.P. Pirone; confirmed through serological tests by M.C. Shurtleff. (Stuckey).

WHEAT STREAK MOSAIC VIRUS - KENTUCKY - New State record. Franklin County--prevalence 1-5% throughout 1 soft red winter wheat field near Frankfort. Collected by R.F. Stuckey, April 26, 1977. Determined with electron microscope by T.P. Pirone; confirmed through serological tests by M.C. Shurtleff. (Stuckey).

#### INSECTS

FALL ARMYWORM (<u>Spodoptera frugiperda</u>) - SOUTH CAROLINA - Statewide--heavy infestations by this species, BEET ARMYWORM (<u>Sexigua</u>), and CORN EARWORM (<u>Heliothis zea</u>) caused heavy and widespread damage to small grains. Newberry County--larvae too heavy to count, all instars in many fields throughout county. (Douglass, Eaton).

RICE WATER WEEVIL (<u>Lissorhoptrus oryzophilus</u>) - ARKANSAS - Statewide--very heavy on rice, apparently unusually large number of this species will be seeking overwintering sites. Woodruff County--about 500 in grain storage bin. (Barnes).

RICE STINK BUG (Oebalus pugnax) - ARKANSAS - Poinsett County-above treatment level in few rice fields. (Kimbrough).

#### TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - SOUTH CAROLINA - Moderate to heavy on golf courses, pastures, and lawns, Coastal Bermudagrass especially heavily infested. (Douglass).

BLUEGRASS WEBWORM (Pediasia teterrella) - ILLINOIS - Western and west-southwestern districts-larvae, pupae, and adults heavy on bentgrass golf greens, some golf greens completely destroyed. (Randell).

SOUTHERN MASKED CHAFER (Cyclocephala immaculata) - ILLINOIS - Western, central, and eastern areas--up to 28 grubs per sq ft bluegrass lawns and golf course fairways. (Randell).

#### FORAGE LEGUMES

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - SOUTH CAROLINA - Statewide-heavy infestations by this species, BEET ARMYWORM (Sexigua), and CORN EARWORM (Heliothis zea) caused heavy and widespread damage to forage legumes. Newberry County-larvae too heavy to count, all instars in many fields throughout county. (Douglass, Eaton).

WESTERN YELLOWSTRIPED ARMYWORM (Spodoptera praefica) - CALIFORNIA - Fresno County--4th instar larvae averaged 6 per 25 sweeps of alfalfa at Mendota. (Dunnegan).

VARIEGATED CUTWORM (Peridroma saucia) - COLORADO - Weld County-larvae 2-15 per sq ft, moderate to heavy, on alfalfa August 10-16. (Urano).

ALFALFA CATERPILLAR (Colias eurytheme) - COLORADO - Arkansas Valley--appeared August 10-16 on alfalfa, 0-300 per 100 sweeps. (Schweissing). TEXAS - Counts on alfalfa by county: Pecos and Reeves--larvae up to 385 per 50 sweeps August 12, up to 215 on August 19 and fewer than 39 per 50 sweeps in most fields; Pecos, Reeves, and Ward--mean of 6-7 per sweep in isolated fields. (Foster, Neeb).

ALFALFA WEEVIL (Hypera postica) - INDIANA - Fulton County--adults (50% males) averaged 1 per sweep in 1 alfalfa field. (Meyer).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - NEW MEXICO - New county record. Valencia County--light populations collected on forage legumes at Los Lunas by J. Durkin, May 4, 1977. Determined by M. Stoetzel. (Durkin).

GRASSHOPPERS - MINNESOTA - Northwest district—averaged 4.6 per sq yd of alfalfa. Economic, 8 or more, along western edge of Polk, Marshall, and Kittson Counties, and central part of Clearwater County. West—central district—averaged 4.8 per sq yd of alfalfa. Economic along U.S. Highway 75, the western edge of Clay and Wilkin Counties, and some spotty infestations in Traverse and Yellow Medicine Counties. Central district—averaged 4.1 per sq yd. Averaged 7 per sq yd in some Sibley County fields. Averages per sq yd for remaining districts: East—central—1.5, southwest—4.5, south—central—1.7, and southeast—less than 1. Most common species Melanoplus femurrubrum, M. bivittatus, and M. differentialis.

#### SOYBEANS

#### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - MISSOURI - Harrison County--prevalence 75%/severity trace in soybean plants August 16-18. (Foudin). ILLINOIS - Prevalence/severity on soybeans by county August 18-19: Piatt--95%/12%, De Witt--60%/10%, Logan--80%/18%, Mason--85%/15%, Hancock--50%/10%, Adams--40%/8%, Morgan--55%/15%, Greene--70%/18%, Macoupin--90%/15%. (Jordan).

INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--soybean brown spot average prevalence 4%/severity 10% in soybeans (bean development stage). (Schall). OHIO - Prevalence/severity in soybeans by county, 1 field each, week ending August 19: Butler--100%/30%, Clark--100%/trace to 50%, Clinton--100%/5-10%, Darke--100%/5-10%, Franklin--100%/5-10%, Hancock--100%/5-15%, Logan--100%/5-10%, Madison--100%/25% lower leaves only, Preble--100%/5-10%, Ross--100%/5-10%, Van Wert--100%/5-10%, Williams--100%/15%, Wood--100%/5%. (Hite). MICHIGAN - Prevalence/severity in soybean plants (and growth stage) by county week ending August 12: Calhoun--20%/10% (beginning bloom), Genesee--sporadic/1% (beginning bloom), Sanilac--80%/65% on Harsoy cultivar (full bloom), St. Clair--5%/1% (beginning bloom), Wayne--40%/20% (rapid pod growth). (Singh).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - MISSOURI - Prevalence in soybean plants by county August 16-18: Clark-25%; Worth--15%; Putnam, Lewis, Schuyler, De Kalb--trace. (Foudin). ILLINOIS - Prevalence/severity in commercial soybeans by county August 18-19: De Witt--70%/10%, Logan--50%/12%, Mason--40%/1%, Hancock--80%/5%, Morgan--95%/10%, Greene--90%/8%, Macoupin--95%/5%. (Jordan). INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties--average prevalence 84%/severity 2% in soybeans (bean development stage). (Schall). OHIO - Prevalence/severity in soybeans by county, 1 field each, week ending August 19: Butler-100%/50%, some defoliation; Clark--100%/trace to 10%; Clinton--100%/5-10%; Franklin--100%/trace; Hancock--100%/trace; Logan--100%/trace to 5%; Preble--100%/5-10%; Ross--100%/5-10%; Williams--100%/trace to 5%; Wood--100%/trace to 5%. (Hite).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae)
MISSOURI - Schuyler County--trace amounts in soybean plants August
16-18. (Foudin). ILLINOIS - Prevalence/severity on stems and pods
of commercial soybeans by county August 18-19: Piatt--8%/2%,
De Witt--4%/0%, Logan--9%/9%, Mason--3%/1%, Adams--5%/2%, Morgan-2%/0%, Greene--10%/10%, Macoupin--7%/3%. Infection also on leaves
in Greene and Morgan Counties. (Jordan).

SOYBEAN STEM CANKER (Diaporthe phaseolorum var. caulivora)
INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey,
Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties-average prevalence trace in soybeans (bean development stage).

PHYTOPHTHORA ROOT AND STEM ROT (Phytophthora megasperma var. sojae) INDIANA - Montgomery, Parke, Clay, Greene, Daviess, Gibson, Posey, Warrick, Spencer, Dubois, Lawrence, Morgan, and Boone Counties—average prevalence 1%/severity 1% in soybeans (bean development stage). (Schall). OHIO - Prevalence in soybeans by county, 1 field each, week ending August 19: Mercer--1%, Preble--5%, Van Wert--5%, Williams--25% in low areas. (Hite). MICHIGAN - St. Clair County-prevalence 2-3%/severity 10% in soybean plants week ending August 12. Rot centered in low, poorly drained areas of field. (Singh).

BROWN STEM ROT (<u>Phialophora gregata</u>) - ILLINOIS - De Witt County-prevalence 6% in commercial soybean field August 18-19. (Jordan).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on commercial soybeans by county August 18-19: Piatt--5%, Mason--7%, Greene--4%, Macoupin--2%. (Jordan).

SOYBEAN ANTHRACNOSE (Collectotrichum dematium var. truncata) - ILLINOIS - Prevalence in 1 commercial soybean field for each county August 18-19: Piatt--4% and De Witt--2%. (Jordan).

TENUISSIMA LEAF SPOT (Alternaria tenuissima) - MISSOURI - Prevalence in soybean plants by county August 16-18: Clark--50% and Schuyler--trace. (Foudin).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - MISSOURI - Prevalence in soybean plants by county August 16-18: Atchinson-99%; Harrison-80%; Holt-75%; Clay, Worth, and Daviess-50%; Putnam, Lewis, and Clark-trace. Leaf area affected trace in all counties except Holt, where leaf involvement up to 5%. (Foudin). ILLINOIS - Prevalence/severity on commercial soybeans by county August 18-19: Piatt-20%/5%, Logan-30%/10%, Mason-60%/5%, Adams-80%/8%. (Jordan). MINNESOTA - Chippewa, Lac Qui Parle, Lincoln, Murray, Pipestone, Pope, Renville, Sibley, Traverse, Wilkin, and Yellow Medicine Counties--prevalence 100%/severity 5-10% (bean full size stage). Lower leaves most heavily infected. (Stromberg).

OHIO - Soybean bacterial blight prevalence/severity in soybeans by county, 1 field each, week ending August 19: Darke--90%/trace to 5%, Logan--50%/trace, Van Wert--100%/5-10%, Wood--100%/trace to 5%. (Hite). MICHIGAN -Prevalence/severity in soybean plants (and growth stage) by county week ending August 12: Calhoun--sporadic/10% (beginning bloom), Genesee--sporadic/5% (beginning bloom), St. Clair--5%/1% (beginning bloom), Wayne--80%/10% (rapid pod growth). (Singh).

TOBACCO RINGSPOT VIRUS - MISSOURI - Pike County--prevalence 40-60% in soybean plants August 16-18. Confirmed in laboratory. (Foudin).

SOYBEAN MOSAIC VIRUS - OHIO - Prevalence in soybeans by county, 1 field each, week ending August 19: Butler--trace, Clark--10-15% along borders, Clinton--trace, Darke--trace, Franklin--1-5%, Logan--trace, Van Wert--1% along borders, Williams--trace. (Hite),

BEAN YELLOW MOSAIC VIRUS - OHIO - Franklin County--prevalence trace in 1 soybean field week ending August 19. (Hite). MICHIGAN - St. Clair County--trace in soybean plants week ending August 12. (Singh).

#### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - KANSAS - Butler, Cowley, McPherson, and Sumner Counties--larvae 2-6.5 per row ft in soybeans. Most larvae very small, some full grown. Adults common in fields. (Bell). WISCONSIN - Rock and Dane Counties--some soybeans treated. Walworth County--up to 10-12 per ft of row. (Lovett). ARKANSAS - Averages per 3 row ft of soybeans by county: Jackson--1.5 and

Lee--1.9, 5 fields each; Lawrence, Greene, and Craighead--8, mostly early instars. (Mayse). MISSISSIPPI - Clay, Oktibbeha, Lowndes, and Noxubee Counties--green cloverworm larvae ranged 4-63 (averaged 15.6) per 25 sweeps in soybean fields. Defoliation 10-60% on pod set stage soybeans. About 20,000 acres received 1 treatment for this species and other defoliators. Pontotoc, Prentiss, Monroe, Lee, Leake, Itawamba, Hinds, and Quitman-heavy. (Anderson).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Statewide--this species, CORN EARWORM (Heliothis zea), BEET ARMYWORM (S. exigua), VELVETBEAN CATERPILLAR (Anticarsia gemmatalis), GREEN CLOVERWORM (Plathypena scabra), and BEAN LEAF BEETLE (Cerotoma trifurcata) damaged 25-50% of the 1.5 million acres of soybeans. H. zea predominant, larvae l-10 per ft of row. Controls becoming general. Lowndes County--larvae averaged 30 per ft of row in 2,500-acre planting and 10 per ft of row in second large planting; fall armyworm predominant. (French et al.). SOUTH CAROLINA - Statewide--heavy soybean infestation by fall armyworm on increase. Controls generally good. (Douglass et al.). TENNESSEE - Lake County--4,000 acres damaged and treated. (Bradley).

SORGHUM WEBWORM (Celama sorghiella) - ARKANSAS - Greene County-up to 12 per head in sorghum. (Mayse, Kimbrough).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - Clay, Lowndes, Oktibbeha, and Noxubee Counties--larvae averaged 2.3 per 25 sweeps of soybeans in pod set stage. (Anderson).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ARKANSAS - Averages per 3 row ft of soybeans by county, 5 fields each: Jackson--1.8, Lee--1.0, and Desha--2.5. (Mayse).

#### **PEANUTS**

#### INSECTS

FALL ARMYWORM (<u>Spodoptera</u> <u>frugiperda</u>) - ALABAMA - Statewide-severe peanut infestations in all counties. Henry County--small larvae 14 and egg masses (50-150 eggs) 1 per ft of row at 1 site. (Barfield et al.).

LESSER CORNSTALK BORER (<u>Elasmopalpus</u> <u>lignosellus</u>) - TEXAS - Comanche County--peanuts up to 85% infested August 12 and up to 65% infested August 19. (Moore).

#### COTTON

#### INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county August 11-19: Williamson and Milam--30% diapausing adults; Ellis and Navarro--up to 26% punctured squares and bolls; Fisher and Jones--punctured squares up to 10% in 85% of fields and 11-24% in 15% of fields on August 12, punctured squares up to 32% in 65% of fields and 33-60% in 35% of fields August 19; Haskell, Kent, and Knox--punctured squares 40-80%. Number of infested fields with punctured squares (and mean percent of punctured squares) by county: Motley--40% in control zone (9.6%); Dickens--50% in control

zone (3.2%), Kent--70%, in control zone (5%), 100% outside control zone (11.3%); Stonewall--100% outside control zone (24.3%). Howard--42% infested fields, mean of 6% damaged squares; St. Lawrence--infested 7 of 96 fields, 2% damaged squares. (Moore et al.).

LOUISIANA - Boll weevils emerged from old cotton squares on ground week of August 19. (Tynes). ARKANSAS - Chicot County--adults, recently molted, up to 28 in 14 row ft of terminals and 50 squares. (Wall). MISSISSIPPI - Punctured cotton squares by county: Pontotoc--2% on 200 acres, Newton--4% on 180, Franklin--5% on 300, Attala--5% on 4,000, Montgomery--3% on 1,350, Lafayette--1% on 2,000, Carroll--8% on 1,500, Monroe--2% on 5,000, Madison--4% on 2,500, Leake--19% on 1,400, and Itawamba--1% on 1,500. (Anderson).

BOLLWORMS (Heliothis spp.) - NEW MEXICO - Eddy, Chaves, parts of Dona Ana, and Luna Counties--BOLLWORM (H. zea) sharply increased on cotton week ending August 19. Eggs and small larvae averaged 1 per plant, much square damage. Controls scarce. (Durkin). Eddy and Chaves Counties--H. zea larvae currently averaged 2-3 per cotton plant. Controls ineffective, approved effective chemicals generally unavailable. (Iselin).

TEXAS - Heliothis spp. on cotton by county August 8-19: Crosby-means of 2 eggs per 100 plants August 9, and 4 on August 16; Fisher and Jones--eggs per 100 plants 10+ in most fields August 12, up to 150 on August 19 with small larvae 0-8 per 100 terminals, damaged squares 0.5%; Haskell and Knox--70 H. zea, 30 TOBACCO BUDWORM (H. virescens), 10-20% damaged squares; Baylor--10-20% damaged squares; Hale--adults 100+ per trap per night August 12; Castro and Lamb--eggs 5-15 per 100 terminals in most fields August 16; Cochran, Parmer, and Gaines--larval mean less than 1 per 100 terminals; South Plains--means of 4-10 eggs and of less than 1 larva per 100 terminals; Floyd--12-20% damaged squares in some fields at Lockney; Tom Green and Runnels--60-80% eggs per 100 terminals; Schleicher--eggs 0-80 per 100 terminals; St. Lawrence Valley--H. <u>zea</u> adults 73 per trap per night August 9, 123 on August 10, and 121 on August 11, H. <u>virescens</u> 22 per trap per night on August 9, and 117 on August 10; El Paso--20-30% eggs. Counts of eggs, larvae, and damaged squares by county: Howard-means of 3 and 1 per 100 terminals and of 4%; Martin-means of 4 and less than 1 per 100 terminals and of 4%; St. Lawrence--means of 8 and 4 per 100 terminals and of 7%; Pecos and Reeves--108, 0-21, and 0-39 per 50 terminals on August 12, and 0-50 and 0-24 (damaged squares not given) per 100 terminals on August 19; Trans-Pecos area--0-10, small larvae 0-4 per 100 terminals and 0-10%. (Byrd et al.).

LOUISIANA - Statewide--H. zea and H. virescens eggs 100+ per 100 plants in some cotton fields week of August 19. Larvae up to 200+ per 100 plants in some fields in upper Red River Valley; egg laying continued at end of week. Adult population shifted from bollworm to predominantly tobacco budworm during week in Red River Valley. Damaged 40-55% of squares in untreated checks in bollworm tests at Red River Valley experiment station and increasing. (Tynes). ARKANSAS - Southeastern area--H. zea and H. virescens generally decreased on cotton but H. virescens to H. zea ratios increased in light trap catches. Drew County--up to 500 Heliothis eggs in 56 row ft. (Wall).

MISSISSIPPI - Heliothis spp. larval infestations on cotton by county: Quitman-12%, up to 30% (eggs 35%, up to 120%) on 200 acres; Webster 3% on 200; Pontotoc--10% on 40; Newton--10% on 180; Franklin--6% on 300; Attala--4% on 4,000; Washington--94% on 4,800; Montgomery--4% on 1,350; Lafayette--15% on 2,000; Carroll--3% on 1,500, 50-75% in 2 fields; Tippah--4% on 2,600; Monroe--5% on 5,000; Madison--15% on 2,500; Lee--4% on 800; Leake--7% on 1,400; Itawamba--2% on 1,500; and Hinds--25% on 120. (Arnold). TENNESSEE - Western area--all larval stages of Heliothis spp. in most late fields above control levels in southern counties. Control difficult. (Locke). SOUTH CAROLINA - Statewide--H. Zea and H. virescens populations decreased week of August 19 in upper area. Populations still heavy in vigorously growing cotton in Marlboro County. Light to moderate on most cotton not growing. Eggs averaged 20-40 per 100 plants. (Douglass, Griffith).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Statewide-larvae still predominant cotton pest. Northern area--adult flights heavy. Egg masses 10 or more per 100 stalks in many fields. Madison County--BOLLWORM (Heliothis zea) larvae 50 per 100 stalks along with S. frugiperda. (Freeman et al.). TENNESSEE - Cotton acreage damaged by fall armyworm (and acres treated) by county: Hardeman--2,000 (1,000) (Kneep) and Lake--300 (300) (Bradley). SOUTH CAROLINA - Greenwood County--larvae heavy, 30-50 per 100 cotton plants, in several fields. Damage primarily to almost mature bolls and very little to foliage. Pee Dee area-similar infestations in several fields in lower counties. Control success erratic. (Douglass, Griffith).

BEET ARMYWORM (<u>Spodoptera</u> exigua) - SOUTH CAROLINA - Statewide-severe infestations almost defoliated some cotton fields in lower counties. No extensive infestations in Piedmont (upper) counties. Control very difficult due to shortage of effective insecticides. (Douglass, Griffith).

COTTON LEAFPERFORATOR ( $\underline{\text{Bucculatrix}}$  thurberiella) - TEXAS - Pecos and Reeves Counties--10-30% cotton defoliation August 12. (Neeb).

CONCHUELA (Chlorochroa  $\frac{1igata}{plants}$ ) - TEXAS - Fisher and Jones Counties--0-14 per  $\frac{100}{plants}$  in all cotton fields August 19.

#### CORRECTIONS

CPPR 2(29):543 - A MYMARID WASP (Anaphes flavipes) ... delete all information for Jay County.

CPPR 2(34):681 - Diagnosis: Part A, line 4 should read ... or long setae, without deciduous cusp or attachment scar. (Whitehead).

#### TOBACCO

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Union County-60 acres damaged and 60 treated on tobacco. (Holt).

A SPHINGID MOTH (Manduca sp.) - TENNESSEE - Smith, Sumner, and Macon Counties--larvae 3-500 per acre (above control level) in 4 of 7 tobacco fields. (Gregory).

A NOCTUID MOTH (Heliothis sp.) - TENNESSEE - Smith, Summer, and Macon Counties--larvae 0-357 per acre (above control level) in 3 of 7 tobacco fields. (Gregory).

#### MISCELLANEOUS FIELD CROPS

#### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - NEBRASKA - Box Butte County--larvae averaged up to 25 per sunflower head in 3 fields. (Marquardt). KANSAS - McPherson County--100% loss of mature sunflowers in field near Groveland. Harvey County--about 50% loss in field in southeast area. Sumner County--only light larval damage (no adults seen) in 2 green, postbloom fields. (Bell).

#### POTATOES, TOMATOES, PEPPERS

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Sussex County--infested 45% of untreated sweet bell peppers in western area. (Burbutis, Kelsey).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Kemper and Lowndes Counties--larval damage heavy to pods of pimento pepper plants. Control unsuccessful. (Cochran).

VARIEGATED CUTWORM (Peridroma saucia) - COLORADO - Weld County-larvae 2-15 per sq ft in potato fields, moderate to heavy, August 10-16. (Urano).

GREEN PEACH APHID (Myzus persicae) - COLORADO - San Louis Valley-light damage with 0-50 per potato plant, increasing August 3-9. (Nelson). Weld County--25-50 per potato leaf, moderate to heavy, August 10-16. (Urano).

#### WEEDS

HEMP BROOMRAPE (Orobanche ramosa) - CALIFORNIA - San Joaquin County--heavy in some spots of 45-acre tomato field on Union Island, 5 miles from any previous find. Santa Clara County--light but scattered in 150-acre field, about 14 miles from any previous find. (Holdeman).

#### BEANS AND PEAS

#### DISEASES

BEAN RUST (<u>Uromyces phaseoli</u> var. typica) - WEST VIRGINIA - Kanawha County--first of season caused light to moderate damage on beans and peas in home garden. (Taylor).

#### GENERAL VEGETABLES

#### INSECTS

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Fresno County-4th-5th instar larval damage heavy to green onions at Fresno. Treatment necessary. (Dunnegan).

#### **DECIDUOUS FRUITS AND NUTS**

#### INSECTS

CODLING MOTH (Laspeyresia pomonella) - WASHINGTON - Pheromone trap catches by county: Chelan--averaged 0.8 in 73 traps week ending August 13 (Rushmore); Grant and Adams--averaged 2.7 in 313 traps week ending August 19 (Hunter); Spokane--very erratic, averaged 3-4 per trap, catches in other Spokane areas dropped markedly week of August 19 (Bosley).

FILBERTWORM (Melissopus latiferreanus) - OREGON - Polk County--larvae heavy in early Milton prune orchard near West Salem. Smaller larvae in solid fruit on trees and nearly full-grown larvae in fruit on ground. Crop may not be marketable due to heavy infestation. Infestation appears isolated. Last reported in prunes in State in 1970. (Penrose).

PEACH TWIG BORER (Anarsia lineatella) - UTAH - Controls worst in many years, larvae infested about 10% of peaches. (Lindsay, Knowlton).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - COLORADO - Mesa County--up to 409 per apple leaf July 27 to August 2. (Bentley).

#### SMALL FRUITS

#### INSECTS

REDBANDED LEAFROLLER (<u>Argyrotaenia velutinana</u>) - PENNSYLVANIA - Erie County--flight activity continued increase, pheromone trap catches in grape vineyard averaged 6.7 per trap per day. (Jubb).

A LEAFHOPPER (Erythroneura elegantula) - PENNSYLVANIA - Erie County--52% damage in 1 grape vineyard, averaged 4% in 6 other vineyards. (Jubb).

#### **ORNAMENTALS**

#### INSECTS

VIOLET SAWFLY (Ametastegia pallipes) - CALIFORNIA - New county record. Contra Costa County--2 larvae fed on leaves of Viola tricolor (wild pansy) at El Cerrito, July 24, 1977. One adult laid eggs on upper surface of leaf. Collected and determined by W.W. Middlekauff. (Middlekauff, Buxton).

#### FOREST AND SHADE TREES

#### INSECTS

AN ADELGID (Adeleges tsugae) - VIRGINIA - New county record, Caroline County-infested established landscape hemlock plants at Bowling Green, April 12, 1977. Collected by W.F. Davis. New Independent City record. Roanoke--infested established landscape hemlock plants May 23, 1977. Collected by R. Holmes. Both determined by J.A. Weidhaas. (Weidhaas).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - New county record. Benson County--adults collected on sticky board trap in National game reserve at Fort Totten, by C. Scholl, August 23, 1977. Determined by E. Balsbaugh. (Balsbaugh, Scholl).

FALL WEBWORM (Hyphantria cunea) - INDIANA - Statewide--more widespread and generally heavier than in last few years, with heaviest infestation in northernmost district. Starke and La Porte Counties--completely denuded trees, some of good size. (Clark, Meyer).

BIRCH LEAFMINER (Fenusa pusilla) - OREGON - New county record. Umatilla County--adults collected on cutleaf and European birch trees grown as ornamentals by large field nursery near Milton and Freewater, July 23, 1977. Collected and determined by K. Goeden. Larval damage heavy. First confirmed record east of Cascade Mountains. (Goeden).

A LEAFHOPPER (Japananus hyalinus) - CALIFORNIA - New county record. Santa Clara County--adults on leaves and growing tips of Acer palmatum (Japanese maple) at Los Altos, August 2, 1977. Collected by R. Langston and J. Ashikawa. Determined by R. Gill. (Gill).

EUROPEAN FRUIT LECANIUM (Lecanium corni) - ALABAMA - New county record. Cleburne County--collected from Oxydendrum arboreum (sourwood) at Heflin, by C.H. Ray, May 21, 1977. Determined by M.L. Williams. (McQueen).

#### MAN AND ANIMALS

#### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - TEXAS - Counts per side of cattle by county: <u>McCulloch-400</u> and Tom Green-250 on August 12; McCulloch, Sterling, Mason, Mitchell, and Schleicher-300-800 on August 19. (Wilson). INDIANA - Grant County-averaged 56 per side of cows and 15 of calves. (Stewart, Laughlin).

FACE FLY (Musca autumnalis) - MISSOURI - East-central area--0-21, averaged less than 5 per head, in 2 herds. (Munson). INDIANA - Grant County--averaged 4 per face on cows and 4 on calves. (Stewart, Laughlin). NEW HAMPSHIRE - Strafford County--averaged 25-50 per face on dairy and beef cattle at Durham August 19. (J.F. Burger).

A MOSQUITO (Culiseta minnesotae) - NEW HALPSHIRE - New State record. Rockingham County-2 adult females collected from CDC light trap at Newton, July 29, 1977. Submitted by J. Tucker. Confirmed by J.F. Burger. (J.F. Burger).

A TABANID FLY (Chrysops univitatus) - OHIO - New county record. Wayne County--taken from man at Wooster, June 30, 1977. Collected and determined by B.M. Drees. (Drees).

A VESPID WASP (<u>Vespula</u> sp.) - CALIFORNIA - Siskiyou County-smoke disturbed many wasps in Hog Ridge and Fong Ridge area. Adults stinging fire fighting crews. Control necessary. (Hawkins, et al.).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

A MINUTE EGG PARASITE (<u>Trichogramma maltbyi</u>) - VIRGINIA - New State record. Augusta County--adults reared from eggs of <u>Oulema melanopus</u> (cereal leaf beetle) collected on oats in Rivers Head Magisterial District, by W. Jones, May 10, 1977. New county record: Rockbridge County--reared from cereal leaf beetle eggs collected from wheat in South River Magisterial District, by W. Clements, May 12. Both specimens determined by V.E. Montgomery. (Allen). WEST VIRGINIA - New State record. Mason County--this parasite of <u>O. melanopus</u> eggs collected on oats in Arbuckle Magisterial District, by L. Sisson, May 19, 1977. Determined by V. Montgomery. (T.L. Burger).

A EULOPHID WASP (<u>Tetrastichus julis</u>) - NEW JERSEY - New State record. Warren County--this parasite of <u>Oulema melanopus</u> (cereal leaf beetle) larvae collected on oats near Hope, by G. Angelet, May 27, 1977. New county record: Hunterdon County--collected on oats near Oldwick, by G. Angelet, May 31. Both determined by R.J. Dysart. (T.L. Burger).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - New county record. San Mateo County--sample collected from large-leafed elm at Hillsborough by J. Canopa and C. Carman, August 11, 1977, about 15 miles from previously infested site. Confirmed by T. Matsumoto. (Arciero).

#### INSECTS

GRASSHOPPERS - CALIFORNIA - San Bernardino County--Melanoplus devastator adults partly to almost totally defoliated first 10 rows of grapes at Fontana. Some bark chewed. Sunburned grapes will result. This species moved in from dry rangeland. (Drake, Harper). COLORADO - Weld and Larimer Counties--several species averaged 11 per sq yd on rangeland. (Sexton).

ORIENTAL FRUIT FLY (<u>Dacus dorsalis</u>) - CALIFORNIA - Los Angeles County--2 males in Jackson trap at Hawaiian Gardens, August 18, about 2 miles from previous find in Orange County. (Drake).

RANGELAND CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Lincoln County--control program completed on 200,000 acres of private, State, and Federal land; control excellent. (Iselin).

#### WEEDS

RUST SKELETONWEED (Chondrilla juncea) - CALIFORNIA - New county record. Calaveras County-found at Mokelumne Hill by L. Howard and R. Farnham, July 26, 1977. Confirmed by D. Barbe. Two other infested sites found following week at Wilseyville. All infestations treated. (Keffer).

DIFFUSE KNAPWEED (<u>Centaurea diffusa</u>) - CALIFORNIA - New county record. Nevada County--1 plant found near Pla Vada, by E. Gunderson and L. Wilcox, August 5, 1977. Determined by D. Barbe. Plant treated. (Keffer).

#### HAWAII PEST REPORT

New Western Hemisphere Record - several specimens of a NOCTUID MOTH (Prospalta dolorosa (Walker)) recovered from light trap at Hickam Air Force Base, Oahu Island, since April 7, 1975, by J.W. Beardsley. Determined by E.L. Todd. Distributed in Sri Lanka, India, Christmas Island, Southeast Asia, Indonesia, New Guinea, Australia, Solomon Islands, New Caledonia, and Fiji. Blumea balsamifera (Nagi camphor) listed as host. (L. Nakahara).

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) moderate to heavy infestations (30-50% of leaves heavily mined) on 1 acre of tomato at Waimea and on 5 acres of watermelon at Kilauea, Kauai. PEPPER WEEVIL (Anthonomus eugenii) counts and damage heavy on 2 acres of sweet pepper (75-80% of fruits infested) at Kilauea and on 2,000 ft of chili pepper (50% of fruits affected at Waimea. CHINESE ROSE BEETLE (Adoretus sinicus) moderate to heavy foliar feeding damage on okra, peanuts, and corn (community gardens) at Kaumakani. (Bianchi et al.).

<u>Fruits and Nuts</u> - New island record for an ERIOPHYID MITE (<u>Friophyes granati</u>). Kauai Island—moderate infestations on single pomegranate tree at Kekaha by F. Bianchi, D. Sugawa, and L. Nakahara, August 18, 1977. Determined by S. Higa. (L. Nakahara).

#### DETECTION

#### INSECTS

A WHITEFLY (Dialeurodes kirkaldyi (Kotinsky)) - New record for PUERTO RICO - Light to heavy infestations found on Jasminum sp. at 3 locations in San Juan (Isla Verde, Los Angeles, Luis Munoz Rivera Park) in July 1977 by E. Feliu and S. Nakahara. Determined by S. Nakahara. Previous collection from same host at Fajardo, May 10, 1971, by P. Fox and determined by L.M. Russell, apparently unpublished. D. kirkaldyi usually infests Jasminum leaves and is known from many parts of the world. In the United States, it occurs in Florida and Hawaii. (Feliu, S. Nakahara).

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A NOCTUID MOTH (<u>Prospalta</u> <u>delorosa</u> (Walker)) - HAWAII - Oahu Island. (p. 707).

NEW STATE RECORDS

#### DISEASES

SOIL-BORNE WHEAT MOSAIC VIRUS - KENTUCKY - Franklin County. (p. 696).

WHEAT STREAK MOSAIC VIRUS - KENTUCKY - Franklin County. (p. 696).

#### INSECTS

A EULOPHID WASP ( $\underline{\text{Tetrastichus julis}}$ ) - NEW JERSEY - Warren County. (p. 706).

A MINUTE EGG PARASITE (Trichogramma maltbyi) - VIRGINIA - Augusta County; WEST VIRGINIA - Mason County (p. 706).

A MOSQUITO (Culiseta minnesotae) - NEW HAMPSHIRE - Rockingham County. (p. 706).

NEW COUNTY, ISLAND, and INDEPENDENT CITY RECORDS

#### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - San Mateo. (p. 706).

#### INSECTS

AN ADELGID (Adelges tsugae) - VIRGINIA - Caroline and Roanoke. (p. 705).

BIRCH LEAFMINER (Fenusa pusilla) - OREGON - Umatilla. (p. 705).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - NEW MEXICO - Valencia.

A EULOPHID WASP (<u>Tetrastichus julis</u>) - NEW JERSEY - Hunterdon. (p. 706).

AN ERIOPHYID MITE (Eriophyes granati) - HAWAII - Kaui. (p. 707).

EUROPEAN FRUIT LECANIUM (Lecanium corni) - ALABAMA - Cleburne. (p. 705).

A LEAFHOPPER (Japananus hyalinus) - CALIFORNIA - Santa Clara.

A MINUTE EGG PARASITE (<u>Trichogramma maltbyi</u>) - VIRGINIA - Rockbridge. (p. 706).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - Benson. (p. 705).

NORTHERN CORN ROOTWORM (<u>Diabrotica</u> <u>longicornis</u>) - WEST VIRGINIA - Ohio and Marshall . (p. 695).

VIOLET SAWFLY (Ametastegia pallipes) - CALIFORNIA - Contra Costa. (p. 705).

A TABANID FLY (Chrysops univittatus) - OHIO - Wayne. (p. 706).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - KANSAS - Pawnee. (p. 695).

#### WEEDS

DIFFUSE KNAPWEED (<u>Centaurea diffusa</u>) - CALIFORNIA - Nevada. (p. 707).

RUST SKELETONWEED (Chondrilla juncea) - CALIFORNIA - Calaveras. (p. 707).

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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Apion craccae (Linnaeus) a weevil Det. D.R. Whitehead	adult	in vetch seed from mail	Italy	Beltsville	MD
Aspidiella hartii (Cockerell) an armored scale Det. R. Kunishi	adult	on ginger root from cargo	Fiji	Hawaii	HI
<pre>Ips typographus (Linnaeus)     spruce bark beetle     Det. D.M. Anderson</pre>	adult	in crates of wire staples	Germany	Wilmington	NC
Orchidophilus aterrimus (Waterhouse) orchid weevil Det. R. Kunishi	adult	with orchid plants from baggage	Hawaii	Kahului	CA
Pseudaonidia trilobitiformis (Green) an armored scale Det. D.M. Odermatt	adult	on plants from baggage	Jamaica	Kennedy Airport	CA
Sirex noctilio Fabricius a horntail Det. D.R. Smith	adult	in crates of glass	Spain	New Orleans	IA
Bradybaena similaris (Ferussac) a snail Det. P. Lima	adult	on container vans	Cuba	Savannah	GA
Theba pisana (Múller) white garden snail Det. P. Lima	juvenile	on dried flowers from cargo	Spain	New York	NY







### UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service

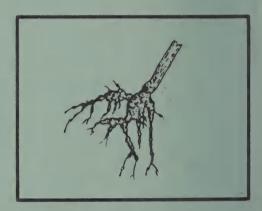
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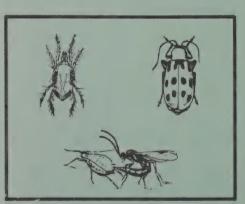
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September 9, 1977

# Cooperative

### PLANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

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## **COOPERATIVE PLANT PEST REPORT**

#### **HIGHLIGHTS**

#### Current Conditions

Treatment may be needed for CORN EARWORM on late-maturing corn in northwestern area of Oregon. Larvae heavy on late-planted corn in north-central Kentucky. (p. 715). Problems on soybeans still serious in Virginia. Corn earworm and others still heavy on late-planted soybeans on Eastern Shore, Maryland. (p. 715-716).

FALL ARMYWORM damage to late-planted sorghum and corn continued in parts of Mississippi, Kentucky, North Carolina, Virginia, and Maryland. (p. 718-719). Will probably be serious on young small grains in Virginia. (p. 719-720). Heavy on grasses in parts of Oklahoma and North Carolina and on alfalfa in Indiana. (p. 720). Fall armyworm and others heavy on soybeans in parts of Alabama. (p. 723). Much boll damage to cotton in west-central area of Oklahoma. (p. 726).

EUROPEAN CORN BORER heaviest since 1971 in Iowa. (p. 718).

First extensive MEXICAN BEAN BEETLE damage to soybeans in Kentucky. (p. 724).

Chemicals unavailable for control of BOLLWORMS in southern New Mexico. (p. 725). Excessive rains interfered with controls in Louisiana. Controls poor in Mississippi and difficult in western Tennessee. (p. 726).

#### Detection



A NOCTUID MOTH found in Hawaii is new for the Western Hemisphere. (p. 724).

New State records include a BRACONID WASP in Oklahoma (p. 730) and VELVETLEAF in Idaho. New THRIPS in Puerto Rico. (p. 731).

For new county records see page 732.

New host records in Florida for 3 SCALES and 2 WHITEFLIES. (p. 729).

Reports in this issue are for the week ending September 2 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

ARMYWORM (Pseudaletia unipuncta) - TEXAS - Castro and Lamb Counties--adults trapped in corn August 24. (Moore).

CORN EARWORM (Heliothis zea) - OREGON - Clackamas County--1% larval infestation in 25-acre sweet corn planting near Aurora August 26. Generally no problem in Willamette Valley as adults do not arrive in western areas until very late in corn growing season. Larvae this early in season may indicate growers may have to treat later maturing fields. (Collins).

TEXAS - Hemphill County--corn earworm infested 75% of some sorghum fields August 22. (Patrick). OKLAHOMA - Wagoner, Muskogee, Sequoyah, Haskell, and Le Flore Counties--all larval instars very heavy in about 25% of soybean fields week ending August 26. Control difficult in few fields but effective in others. Wagoner County--larvae currently 20-60 per 30 row ft in soybeans. Garfield and southwestern counties--light pod damage in mung beans. Averages per 10 sweeps of alfalfa by county: Washita--20, south-western--4, and Murray--less than 1. Corn earworm and FALL ARMY-WORM (Spodoptera frugiperda): Washita and Beckham Counties--heavy on heads of scattered late-planted sorghum fields and Stephens County--ranged 0-2 per head. Some fields treated. (Arnold).

GEORGIA - Corn earworm larvae per row ft of southern peas by county week ending August 26: Washington--8 and Taylor--4. (Stacy). SOUTH CAROLINA - Spartanburg County--light to moderate infestation caused moderate damage to young pods in 60-acre soybean field August 26. Controls recommended. (Douglass).

NORTH CAROLINA - Corn earworm pupation rapid in 9 of 10 soybean fields week ending August 26. Controls effective where insecticides properly applied, but some fields still at threshold of 2 per ft of row. Edgecombe, Halifax, and Northampton Counties—damage continued with 4+ small larvae per ft of row in 5 of 10 peanut fields. Currently in Coastal Plain and Piedmont—pupation completed in most early and midseason variety soybeans. Piedmont and central and northern Coastal Plain—still economic in scattered late soybean fields. (Hunt). KENTUCKY—Larvae heavy in very late—planted corn where ears still between blister and dent stage. Most larvae almost full grown. Percent infested ears (and larval averages per infested ear) by county, 1 field each: Boyle—93 (1.6), Hardin—71 (1.9), and Washington—55 (1.0). (Sloderbeck).

VIRGINIA - Serious corn earworm problems on soybeans continue as far inland as Lunenburg County. Susceptible beans will be affected by very heavy populations until frost. Westmoreland County--3,000-5,000 acres of soybeans sprayed week of August 15; third generation on schedule as of September 1, larvae 10-12 per row ft common. (Allen). MARYLAND - Eastern Shore counties--corn earworm with S. frugiperda, BEET ARMYWORM (Spodoptera exigua), and ARMYWORM (Pseudaletia unipuncta) still very heavy on late-planted soybeans, especially in Worcester, Somerset, and Wicomico Counties. Pod stripping here averaged 25%, up to a maximum of 90% in 120 acres in Somerset County and averaged 10% in Upper Shore counties. Control chemicals in short supply in Eastern Shore counties. Erratic

control achieved by commercial aerial applicators due to low water volume sprays (3 instead of 5 gal per acre). Lower Eastern Shore counties—tomato variety Chico-3 fields where spray schedules not followed averaged 20% fruit damage by corn earworm. (Hellman, Pinto). NEW YORK — Ontario County—first of season adult catch week of August 22-28. (Chapman).

POTATO LEAFHOPPER (Empoasca fabae) - OHIO - Counts per sweep by county: Pickaway--0.5 in clover and alfalfa field, 9 in soybean field; Franklin--2.1 on alfalfa 16 inches tall; and Fairfield--0.08 in soybean field. Overall decrease in soybeans expected as cool temperatures become more frequent. (Drees, Walsh). PENNSYLVANIA - Erie County--infested about 32% of foliage in 1 grape vineyard. (Jubb). NEW JERSEY - Adults and nymphs per 25 sweeps of alfalfa by county: Burlington--28 at Columbus and 121 at Bordentown; Mercer--106 at Yardville; and Monmouth--101 at Allentown and 98 at Clarksburg. (Vasvary).

TOBACCO HORNWORM (Manduca sexta) - MARYLAND - Charles and Prince Georges Counties--this species and TOMATO HORNWORM (M. quinquemaculata) moderate to heavy on tobacco; 30% of plants infested with mixed instars week ending August 29. (Hellman, Pinto).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - ILLINOIS - Prevalence/severity on commercial field corn (all kernels dented unless stated otherwise) by county August 25-26: Ford--6%/1%, Livingston-40%/1%, Grundy--99%/3%, Kankakee--30%/1%, Iroquois--55%/1% (few kernels dented), Champaign--20% 1%, and Edgar--12%/1% (physiologic maturity). (Jordan). INDIANA - Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 5%/severity trace, maximum 33%/1%. (Schall).

MICHIGAN - Common maize rust prevalence/severity in corn plants (and growth stage) by county August 20-26: Muskegon--50%/20% (kernels blistered), Montcalm--1%/1% (soft dough), and Tuscola--30%/5% (soft dough). (Singh).

MINNESOTA - Dent corn (all kernels dented) fields in Olmsted, Winona, Fillmore, Mower, Freeborn, Faribault, Martin, Jackson, Rock, Brown, Blue Earth, and Steele Counties--common maize rust found in all fields surveyed, prevalence 100%/severity 10-30% of foliage. (Stromberg). SOUTH DAKOTA - Most widespread corn disease August 29-31. Lincoln, Union, Clay, Yankton, Turner, Bon Homme, Charles Mix, Hutchinson, Douglas, Davison, Hanson, Lake, Clark, Day, and Marshall Counties--prevalence 90-100%/severity 5-10%. (Jons).

COMMON SMUT (Ustilago maydis) - ILLINOIS - Prevalence on commercial field corn (all kernels dented unless stated otherwise) by county August 25-26: Ford-18%, Livingston-12%, Kankakee-6%, Iroqueis-3% (few kernels dented), Vermilion-2% (physiologic maturity), Champaign-4%, Douglas-4% (physiologic maturity), and Edgar-7% (physiologic maturity). (Jordan). INDIANA - Corn (all kernels

dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties—average prevalence 2%, maximum 8%. (Schall). MICHIGAN—Common smut prevalence/severity in corn plants (soft dough unless stated otherwise) by county August 20-26: Muskegon—1% 99% (kernels blistered), Newaygo—10%/99% (few kernels dented), Montcalm—2% 99%, Saginaw—trace 99%, and Tuscola—2% 99%. (Singh).

MINNESOTA - Dent corn (all kernels dented) fields in Olmsted, Winona, Fillmore, Mower, Freeborn, Faribault, Martin, Jackson, Rock, Brown, Blue Earth, and Steele Counties--common smut in all fields, prevalence trace to 30% (Blue Earth County). (Stromberg). SOUTH DAKOTA - Eastern area--prevalence usually less than 5% in most commercial corn fields except in 1 hybrid seed corn field, in Moody County (75%) and 1 field in McCook County (15%). (Jons).

<code>HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity on commercial field corn (and growth stage) by county August 25-26: Livingston--15% 10% (all kernels dented), Iroquois--18%/12% (few kernels dented), Vermilion--5%/10% (physiologic maturity), Champaign--3%/8% (few kernels dented), and Edgar--10%/10% (physiologic maturity). (Jordan).</code>

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - INDIANA - Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 28%/severity 7%, maximum 95%/30%, on live leaves. Leaves dead on bottom half of stalk in heavily infected fields. (Schall).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - INDIANA - Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 1%/severity trace, maximum 2%/trace. (Schall).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) — ILLINOIS — Leaf spot prevaTence/severity on commercial field corn (all kernels dented unless stated otherwise) by county August 25-26: Ford-45% 30%, Grundy-30% 25%, Vermilion-55%/30% (physiologic maturity), Champaign-90%/33%, Douglas-95%/25%, and Edgar-90% 28%. Stalk rot prevalence on commercial field corn (physiologic maturity): Vermilion-7%, Douglas-4%, and Edgar-6%. (Jordan). INDIANA — Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 26%/severity 6%, maximum 100%/20% on live leaves. Leaves dead on bottom half of stalk in heavily infected fields. (Schall).

FUJIKUROI ROT (Gibberella fujikuroi) - ILLINOIS - Ear rot prevalence on commercial field corn (all kernels dented unless otherwise stated) by county August 25-26: Ford-5%, Livingston-6%, Grundy-9%, Kankakee-7%, Iroquois-3% (few kernels dented), Vermilion-4% (physiologic maturity), Champaign-2%, Douglas-2% (physiologic maturity), and Edgar-3% (physiologic maturity). (Jordan).

ROSEUM ROT (Gibberella roseum f.sp. cerealis) - ILLINOIS - Stalk rot prevalence on commercial field corn (physiologic maturity unless stated otherwise) by county August 25-26: Livingston--8% (all kernels dented), Douglas--7%, and Edgar--5%. (Jordan).

EAR ROTS - ILLINOIS - Grundy County--Penicillium spp. infected 1% of commercial field corn (all kernels dented) August 25-26. (Jordan). MINNESOTA - Fusarium spp. prevalence in 1 corn field each by county: Mower--20%, Faribault--trace, and Martin--trace. (Stromberg).

STALK ROTS (Fusarium spp.) - MINNESOTA - Prevalence in corn fields (all kernels dented unless stated otherwise) by county: Freeborn-20%, Jackson--75% (harvest maturity), and Brown--5%. (Stromberg).

STEWART'S WILT (Erwinia stewartii) - ILLINOIS - Prevalence/severity on commercial field corn (and growth stage) by county August 25-26: Iroquois--3%/12% (few kernels dented) and Vermilion--1%/10% (physiologic maturity). (Jordan). INDIANA - Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 29%/severity 4%, maximum 60%/20%. (Schall).

MAIZE DWARF MOSAIC VIRUS - INDIANA - Corn (all kernels dented) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence trace, maximum 2%. (Schall).

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - IOWA - Statewide-larvae continued economic in field corn, heaviest since 1971. All larval sizes on Calhoun County corn. Dropped ears present. Some cornstalks broken. Damage expected to increase. Adult flights continued. Second and third generation larvae present. (J.R. DeWitt). NORTH CAROLINA - Piedmont area--larval damage to shanks and stalks of dry field corn resulted in dropped ears in at least 1 county. Anson County--potentially serious loss in at least 2 corn fields. Loss due to weakened ear shanks and stalks plus wind and rot. Only early harvest will reduce yield loss. (Potter).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - TEXAS - Castro and Lamb Counties--third generation eggs on late corn August 24. (Moore). OKLAHOMA - Panhandle counties--occasional girdled stalk in corn week ending August 26. Heavily infested many fields with ear damage in some areas. Cimarron County (eastern edge)--infested 30% of stalks in 1 grain sorghum field. (Arnold).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Garfield County-infested 50% of plants in field of 24-inch grain sorghum. Washita, Becknam, and Stephens Counties--this species and CORN EARWORM (Heliothis zea) in sorghum heads. (Arnold). MISSISSIPPI - Noxubee County--fall armyworm larvae heavily defoliated late-planted grain sorghum; 3 insecticide applications applied with poor results. (Jarratt). KENTUCKY - Larvae continued to damage late-planted corn fields. All larval sizes fed on corn ears. Percent infested ears (and

larval averages per infested ear) by county, 1 field each: Boyle-40 (1.2), Hardin-47 (1.3), and Washington-70 (1.2). (Sloderbeck). NORTH CAROLINA - Orange, Chatham, and Wake Counties--very heavy fall armyworm infestations continued August 22-25, larvae 3+ per late sorghum plant in 6 of 9 fields. Larvae ranged 1st-3rd instar in a 25-acre field. (Hunt). VIRGINIA - Amherst, Amelia, Nottoway, and Stafford Counties--heavy on several crops, corn favorite host, but damage to alfalfa occurred. Lancaster County--larvae 3-4 per sq ft, unusual count for State, on about 25 acres August 23. (Allen). MARYLAND - Frederick, Carroll, and Calvert Counties--heaviest outbreak in 10 years in late-planted silage corn where larvae infested 30-100% of plants. Only low control achieved with heavy pest pressure expected to continue. Similarly infested field corn on Eastern Shore and southern counties--larvae burrowed deeply into ears resulting in "no-control" situation with significant losses expected. (Hellman, Pinto).

SORGHUM WEBWORM (Celama sorghiella) - ARKANSAS - Northeastern area--larvae up to 15 per head in sorghum fields. (Kimbrough).

CORN ROOTWORMS (Diabrotica spp.) - MINNESOTA - Adults surveyed in 56 corn growing counties and 208 corn fields in 1977, 10 plants per field. NORTHERN CORN ROOTWORM (D. longicornis) and WESTERN CORN ROOTWORM (D. virgifera) populations decreased in west-central, southwest, and south-central districts and increased in central, east-central, and southeast districts. Lodging decreased in all districts, yet adults increased in some districts. Statewide average decreased to 37,289 adults per acre compared with 43,364 per acre in 1976. Percentage of lodged corn less than 1% statewide in 1977, much less than in previous 4 years. Ratio of D. longicornis to D. virgifera reversed, 83:17 in 1977 compared with 40:60 in 1976. Adults per acre/ratio of D. longicornis to D. virgifera by district: West-central--36,411/73:27, central--30,951/87:13, east-central--30,314/57:43, southwest--36,392 97:3, south-central--33,216/95:5, and southeast--56,452/91:9. (Sreenivasam).

OHIO - New county records for <u>D. virgifera</u> collected on corn August 26, 1977. Morrow County--6 miles north of Mt. Gilead; Marion County--5 miles northeast of Marion; and Crawford County--3 miles north of Bucyrus. All collected by S.L. Clements, M. Casey, and B. Schmidt. All determined by G. Szatmari-Goodman and B.M. Drees. (Drees).

SORGHUM MIDGE (Contarinia sorghicola) - ARKANSAS - Northeastern area--above treatment level in many late-blooming sorghum fields. (Kimbrough). MISSISSIPPI - Marion and Copiah Counties--adults heavy on bloom stage grain sorghum. (Cochran).

A LYGAEID BUG (Nysius sp.) - TEXAS - Reeves County--maximum of 100+ per sorghum head August 26. (Neeb).

#### SMALL GRAINS

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - VIRGINIA - With another generation to be completed, will probably become very serious on young, succulent grain crops. Expected to continue serious until

hard frost occurs. Accomack County--fall armyworm and CORN EARWORM (Heliothis zea) adults in light traps at Painter Station decreased to about 25% of high reported August 17-24; still enough adults to cause problems, can expect more damage in mid to late September. (Allen).

#### TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Lincoln and Bryan Counties--heavy in pastures, averaged 30 per sweep in Lincoln County. (Arnold). ALABAMA - Montgomery County--all larval instars on dallisgrass, johnsongrass, and grain sorghum fields in Snowdown and Hope Hull areas. (Jones et al.). SOUTH CAROLINA - Pickens County--continued to infest pastures, especially those with Coastal Bermudagrass. Larvae, 3-5 per sq ft (moderate) in 7-acre pasture at university, controls applied. (Douglass). NORTH CAROLINA - Wake and Harnett Counties--severe infestations, larvae averaged 15 per sq ft of Coastal Bermudagrass in Wake County with up to 40 per sq ft on 2-acre-sized spots week ending August 26. Control under crisis exemption effective. (Hunt).

A WEEVIL (Sphenophorus venatus) - ALABAMA - New county record. St. Clair County--adults heavy, dead specimens collected following treatment of zoysiagrass lawn at Pell City, by W.D. Jackson, August 8, 1977. Determined by D.R. Whitehead. (McQueen).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - NEVADA - New county record. Elko County--collected in Upper Ruby Valley, July 21, 1977, from wild hay meadow by C. Anderson. Determined by R.C. Bechtel. (Bechtel).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - New county records. Santa Barbara County-heavy on St. Augustinegrass at Santa Barbara August 15, 1977. Collected by P. Okuye. Solano County--nymphs and adults very heavy on St. Augustinegrass at Vallejo August 23. Collected by J. De Hoop. Both determined by A. Hardy. (De Hoop et al.).

#### FORAGE LEGUMES

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - INDIANA - Harrison County--defoliation complete in 2 of 20+ acres in an alfalfa field. Alfalfa in rest of field 15-25 inches tall. Larvae up to 10 per sq ft in most heavily infested area with 20-50% parasitism and occasional cannibalism. Larvae 5-6 per sq ft outside heavily infested area in many areas, occasional feeding evident. (Meyer).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Averages per 10 sweeps of alfalfa by county: Washita--23 and Murray--5. Stephens County--averaged 3 per sq ft of recently cut alfalfa, adults heavy and laying eggs. (Arnold).

ALFALFA WEEVIL (Hypera postica) - NEW YORK - Wayne County--adults 10 per 100 sweeps of alfalfa August 26, may indicate return to alfalfa following estivation. (Gyrisco).

PEA APHID (Acyrthosiphon pisum) - OHIO - Pickaway County--8.1 per sweep in alfalfa and clover field. Winged forms light. (Drees).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Average per 10 sweeps of alfalfa by county: Southwestern counties--7 and Murray--6. (Arnold).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - OKLAHOMA - Murray County--mostly adults averaged 36 per 10 sweeps in 1 alfalfa field. (Arnold).

#### SOYBEANS

#### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - ILLINOIS - Prevalence/severity on soybeans by county August 25-26: Ford-90%/12%, Livingston-99%/18%, Grundy-99%/15%, Kankakee-99%/20%, Iroquois-99%/18%, Vermilion-99%/12%, Champaign-99%/18%, Douglas-90%/5%, and Edgar-95%/5%. (Jordan). INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 59%/severity 5%, maximum 90%/10%. (Schall). MICHIGAN - Prevalence/severity in soybean plants (and growth stage) by county August 20-26: Muskegon-5%/1%, (beans beginning to develop), Montcalm-10%/1% (beans full size), and Tuscola--trace/trace (beginning bloom). (Singh).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - ILLINOIS - Prevalence/severity on soybeans by county August 25-26: Ford-90%/10%; Livingston--85%/10%, Grundy--90%/5%, Vermilion--95%/5%, Champaign--99%/12%, and Edgar--99%/12%. (Jordan). INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 90%/severity 4%, maximum 90%/10%. (Schall). MICHIGAN - Prevalence/severity in soybean plants (beans full size) by county August 20-26: Montcalm--10%/10% and Saginaw--1%/1%. (Singh).

BROWN STEM ROT (Phialophora gregata) - MINNESOTA - Prevalence in soybean fields by county: Mower-5%, Faribault--30%, Martin--75%, Jackson--30%, Brown--100%, Blue Earth--100%, and Steele--90%. Heavier prevalence associated with advanced maturity of field. In most cases, browning of vascular tissue confined to about basal 8 cm of stem. (Stromberg). ILLINOIS - Prevalence on soybeans by county August 25-26: Ford--3%, Kankakee--60%, Iroquois--21%, Vermilion--26%, Champaign--7%, and Douglas--4%. (Jordan). INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 8%, maximum 60%. (Schall).

SOYBEAN POD AND STEM BLIGHT (<u>Diaporthe phaseolorum var. sojae</u>) - MINNESOTA - Prevalence in maturing soybean fields by county: Freeborn--5%, Martin--10%, Brown--100% in a mature field, and Steele--5%. Pycnidia only on stems, usually confined to basal portion. (Stromberg). ILLINOIS - Prevalence on stems (and pods) of

soybeans infected by Diaporthe phaseolorum var. sojae by county August 25-26: Grundy-5% (1%), Kankakee-12% (5%), Iroquois-5% (0), Vermilion-7% (5%), Champaign-4% (1%), Douglas-8% (20%), and Edgar-6% (1%). (Jordan).

POWDERY MILDEW (Microsphaera diffusa) - MINNESOTA - Prevalence/severity in soybean plants (physiologic maturity) by county: Mower-100%/25%, Freeborn--20%/10%, and Faribault--80%/5%. (Stromberg).

PHYTOPHTHORA ROOT AND STEM ROT (Phytophthora megasperma var. sojae) - MICHIGAN - Prevalence/severity in soybean plants (and growth stage) by county August 20-26: Muskegon--20%/99% (beans beginning to develop) and Saginaw--1%/trace (beans full size). (Singh).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - ILLINOIS - Prevalence on soybeans by county August 25-26: Grundy-3%, Kankakee-2%, Vermilion-4%, and Champaign-2%. (Jordan).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on soybeans by county August 25-26: Iroquois--2%, Champaign--1%, and Edgar--2%. (Jordan).

LEAF SPOTS (Alternaria spp.) - MINNESOTA - Freeborn, Faribault, Martin, Jackson, Rock, and Steele Counties--prevalence 80-100%/severity 5-10% of soybean (physiologic maturity) foliage. (Stromberg).

SCLEROTIORUM ROT (Sclerotinia sclerotiorum) - MICHIGAN - Montcalm County--2 diseased soybean (beans full size) plants August 20-26. (Singh).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - SOUTH DAKOTA - Most widespread soybean disease August 29-31. Lincoln, Union, Clay, Yankton, Turner, Bon Homme, Charles Mix, Douglas, Davison, and Hanson Counties--prevalence 75-100%/severity 5-15% (majority of fields in green bean stage). (Jons). MINNESOTA - Soybeans (beans full size) in Mower, Freeborn, Faribault, Martin, Jackson, Rock, Brown, Blue Earth, and Steele Counties--prevalence 100%/severity 5-20% of foliage in all fields surveyed. (Stromberg). INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 13% severity 1%, maximum 60%/5%. (Schall). MICHIGAN - Prevalence/severity in soybean plants (and growth stage) by county August 20-26:
Muskegon--1%/trace (beans beginning to develop), Montcalm--1%/1% (beans full size), Saginaw--1%/1% (beans full size), and Tuscola-trace trace (beginning bloom). (Singh).

WILDFIRE (Pseudomonas tabaci) - INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 3%/severity trace, maximum 50%, 2%. (Schall).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - ILLINOIS - Prevalence/severity on soybeans by county August 25-26: Livingston--10% 2%, Grundy--50% 5%, Iroquois--45% 9%, Douglas--8%/3%, and Edgar--10%/1%. (Jordan). INDIANA - Soybeans (bean development) in Madison, Henry, Wayne, Franklin, Dearborn, Ohio, Jefferson, Clark, Scott, Jennings, Bartholomew, and Shelby Counties--average prevalence 2%/severity trace, maximum 10% 2%. (Schall).

SOYBEAN MOSAIC VIRUS - MICHIGAN - Prevalence severity in soybean plants (and growth stage) by county August 20-26: Muskegon-trace/trace (beans beginning to develop) and Saginaw--trace trace (beans full size). (Singh).

BEAN YELLOW MOSAIC VIRUS - MICHIGAN - Prevalence severity in soybean plants (and growth stage) by county August 20-26; Muskegon--trace trace (beans beginning to develop) and Montcalm--trace trace (beans full size). (Singh).

TOBACCO RING SPOT VIRUS - MICHIGAN - Muskegon County--trace in soybeans (beans beginning to develop) August 20-26. (Singh).

#### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Wagoner, Muskogee, Sequoyah, Haskell, and Le Flore Counties--up to 20 per row ft, heavy, continued in scattered soybean fields week ending August 29. (Arnold).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - George County--larvae averaged 3 per row ft on bloom stage soybeans, 40% defoliation in fields. (Lambert).

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Montgomery County--populations of this species, BEET ARMYWORM (Spodoptera exigua), SOYBEAN LOOPER (Pseudoplusia includens), VELVETBEAN CATERPILLAR (Anticarsia gemmatalis), and CORN EARWORM (Heliothis zea) 1-10 per ft of row, heavy, in several large soybean fields.

A. gemmatalis averaged 1 per 10 sq ft in 2 fields. (Hanks et al.).

BEET ARMYWORM (Spodoptera exigua) - ARKANSAS - Desha County-larvae very heavy in some soybean fields. All larval sizes, newly hatched larvae very heavy. Chemical control efforts generally ineffective. (Mayse).

SOYBEAN LOOPER (Pseudoplusia includens) - ARKANSAS - Southeastern area--larvae of this species and CABBAGE LOOPER (Trichoplusia ni) very heavy in soybeans, hatch very heavy in past few days. (WaII).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Beaver County-larvae, 1 inch long, averaged 3 per 3 row ft of soybeans and larvae, 0.25 inch long, ranged 5-20 per 3 row ft week ending August 26. Defoliation 5-10% in several fields; treatment planned. Texas County--small larvae 3-10 per 3 row ft. (Arnold).

SALTMARSH CATERPILLAR (Estigmene acrea) - MARYLAND - Wicomico County--this species and YELLOW WOOLLYBEAR (Diacrisia virginica) infested 100 acres of soybeans at Salisbury week ending August 26; larvae 8-10 per row ft, 40% defoliation. (Hellman, Pinto).

MEXICAN BEAN BEETLE (Epilachna varivestis) - KENTUCKY - Trimble County--adults and larvae heavily defoliated soybeans. Averaged 5 per ft of row. (Christensen). Breckinridge and Meade Counties-damaged soybeans in Ohio River Bottoms. First reports of extensive E. varivestis damage to soybeans in State. These counties border southern Indiana, may indicate movement of "biotype" into State. (Raney).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ARKANSAS - Averages per 3 row ft of soybeans by county (2-5 fields per county): Conway-2.5, Jackson--3.1, Lee--0.6, Desha--1.9, and Drew--1.5. (Dumas, Mayse).

A CHRYSOMELID BEETLE (Systema frontalis) - OHIO - Fairfield County--1.04 per sweep (heavy) and moderate leaf feeding damage in soybean field near Buckeye Lake. Pods 1.5-2 inches long at top of plants. (Drees).

#### PEANUTS

#### INSECTS

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Caddo and Washita Counties--peanut terminal infestations ranged 25-100% with most fields averaging 75% or more week ending August 29. Okfuskee County--averaged 10 per row ft. Hughes County--ranged 5-6 per 100 sq ft. (Arnold).

#### HAWAII PEST REPORT

New Western Hemisphere Record - Oahu Island--female of a NOCTUID MOTH (Leucania sp. probably insecuta (Walker)) collected from light trap at Hickam Air Force Base, Oahu Island, by J.W. Beardsley, October 23, 1973. More specimens not trapped until 1977: A male and female at above location in May; female at Barbers Point Naval Air Station, Oahu, in August. Determined by E.L. Todd. L. insecuta is found in Japan and China. Leucania species are mainly grass feeders. (Beardsley).

General Vegetables - ONION THRIPS (Thrips tabaci) heavy (50+ per plant on all plants) on 5 acres of mature round onion at Pulehu and Omaopio, Maui. (L. Nakahara).

#### COTTON

#### INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county August 22-29: Fisher and Jones--punctured 25+% of squares in 75% of fields; Rolling Plains area--damaged squares up to 90%, less than 50% in most fields; Mitchell and Scurry--punctured squares up to 50%; St. Lawrence area--infested 6% of 83 fields, damage 0-7% (mean 3%); Howard--infested 61% of fields, mean of 5% damaged squares in infested fields; Glasscock, Upton, and Reagan--5,000 infested acres. Mean per acre, % of infested fields with punctured squares, % (and mean) of punctured squares by county: Motley in control zone--2,000, 60%, 0-73% (26.8%); Dickens in control zone--100, 40%, 0-17% (2.5%); Kent in control zone--220, 60%, 0-35% (10.8%), Kent outside control zone--850, 100%, 4-93% (39.3%); and Stonewall outside control zone--1,640, 100%, 27-51% (38.7%). (Boring et al.). OKLAHOMA - Washita, Caddo, and Canadian Counties--punctured squares up to 10% in cotton week ending August 6. Current punctured squares: Custer--0.45%; Caddo--15-25%; Beckham--up to 35%; Jackson, Greer, Harmon, Tillman, and Kiowa--0-12%. (Arnold).

MISSISSIPPI - Boll weevil punctured cotton squares by county: Alcorn--1% on 200 acres, Copiah--2% on 1,100, Covington--5% on 40, Franklin--4% on 300, Holmes--12% on 700, Itawamba--1% on 1,200, Jasper--20% on 300, Leake--20% on 1,400, Lincoln--20% on 500, Monroe--4% on 5,000, Montgomery--8% on 2,200, and Tate--1% on 2,500. (Anderson). ALABAMA - Colbert County--square damage up to 35% in few "hotspots". (McQueen). GEORGIA - Adults trapped by county week ending August 26: Dooly--9 and Crisp--3. (Emery, Lambert).

BOLLWORMS (Heliothis spp.) - NEW MEXICO - Eddy, Chaves, and Dona Ana Counties--1 or more larvae per cotton plant on 80% of plants. Much damage but chemicals unavailable for control. (Durkin). TEXAS - BOLLWORM (H. zea) and TOBACCO BUDWORM (H. virescens) counts on cotton by county August 23-29: Fisher and Jones--eggs 5-100 per 100 terminals, egg means 30-35 per 100 terminals in most fields, larvae 3-8 or 25-45 per 100 terminals in most fields, damaged squares 2-18%; Rolling Plains area--damaged squares 30-60% in most heavily infested fields, larvae up to 60 per 100 terminals; Baylor--80 H. virescens to 20 H. zea in 1 field; Mitchell and Scurry--eggs up to 2 per plant; Crosby and Floyd-eggs 30-40 (mean 20) per 100 terminals in many fields, larvae up to 7 per 100 terminals; Castro and Lamb--larvae 2-30 per 100 plants, damaged squares 0-12%, adults up to 250 per trap per night; Hale--eggs 10-30%, damaged squares 2-22%, larvae 0-20 (mean 9) per 100 plants; Gaines--eggs 0-170 per 100 terminals, small larvae 40-310 per 100 plants, damaged squares 10-90%; St. Lawrence area--mean of 15 eggs per 100 terminals, larvae 2%, damaged squares 5+%; Martin--5-16 (mean 10) per 100 terminals, mean of 3% larvae per 100 terminals, damaged squares 1-7%; Howard-eggs 0-40 per 100 terminals, damaged squares 0-6% (mean 2%); Pecos and Reeves--eggs up to 25, larvae up to 19, and damaged squares 1-22 per 100 terminals. (Finley et al.).

OKLAHOMA - Heliothis spp. on cotton by county week ending August 29: Caddo--larvae up to 20 per 100 terminals and Washita--larvae up to 10 per 100 terminals, larvae in both counties less than 1% H. virescens: Grady--damaged squares up to 40%, larvae 60% H. virescens; and Tillman--damaged squares up to 10%, larvae 5% H. virescens. Current counts: Jackson, Greer, Harmon, Tillman, and Kiowa--larvae 5-18 and eggs 0-32 per 100 terminals, damaged squares 0-17%; and Caddo--larvae up to 12 and eggs 10 per 100 terminals. Grady County--larvae 14 H. virescens (54%) and 12 H. zea in untreated fields, and 44 H. virescens (86%) and 7 H. zea in treated field at Chickasha. (Arnold).

LOUISIANA - Statewide--H. zea and H. virescens eggs 10-300+ per 100 cotton plants early last week (August 22-26) but appeared to decrease at end of week. Eggs should peak again in 10-14 days. H. virescens adults increased statewide. Excessive rain made it difficult to keep insecticides on plants on a 4-day schedule. (Tynes). ARKANSAS - H. zea and H. virescens eggs up to 200 per 56 row ft and larvae 0-50 per 56 row ft in greener cotton fields. Adults increased; proportional increase of H. virescens also. (Wall). Craighead County-Heliothis eggs and larvae above treatment level in several fields. (Kimbrough).

MISSISSIPPI - Statewide-Heliothis spp. problems continue in many areas due to poor control on cotton. Larval infestations on cotton by county: Alcorn--5% on 200 acres, Copiah--6% on 1,100 with eggs 40-60%, Covington--5% on 40, Franklin--10% on 300, Hinds--10% on 400, Holmes--15-25% on 1,000, Itawamba--5% on 1,200, Leake--10% on 1,400, Lincoln--20% on 500, Monroe--8% on 5,000, Montgomery--4% on 2,200, Pontotoc--8% on 100, Tate--3-20% on 2,500, and Washington--12% on 4,200. (Anderson). TENNESSEE - Western area--Heliothis sp. above control levels in most late cotton fields in southern counties. All stages of larvae in fields surveyed. Control very difficult. Egg laying very heavy. (Locke). GEORGIA - H. virescens adults trapped by county week ending August 26: Dooly--3, Crisp and Turner--2, and Tift--1. Tift County--"sugar line" survey August 22 showed 73 H. virescens and 97 H. zea. (Emery, Lambert). SOUTH CAROLINA - Statewide--although cotton matured rapidly in many areas and H. zea and H. virescens decreased in some places, young cotton and new growth on older cotton still infested August 26. York and Chester Counties--high of 60 eggs per 100 plants and 0.25-inch-long larvae on 400-600 acres. (Douglass).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Beckham County-2nd to 5th instar larvae moved from plowed fields of volunteer wheat and johnsongrass in ditches into cotton in some areas. Much boll damage; 500 acres of cotton treated. (Arnold). LOUISIANA - Feeding on squares and bolls in few cotton fields but not wide-spread August 22-26. (Tynes). MISSISSIPPI - Monroe County-larvae damaged mature bolls in cotton fields. Up to 30% boll damage in some spots where cotton finished and controls stopped. (Kitten). ALABAMA - Northern area-egg laying and small larvae heavy on cotton past 10 days. Many fields with 20-30 larvae (1st to 2nd instars) per 100 stalks feeding on small squares and boll brackets. (McQueen). SOUTH CAROLINA - Greenwood Countý-continued heavy on almost mature bolls in 40 acres. (Douglass).

BEET ARMYWORM (Spodoptera exigua) - TEXAS - Castro and Lamb Counties--25-30% infested plants in 2 cotton fields August 24. (Moore).

CABBAGE LOOPER (Trichoplusia ni) - OKLAHOMA - Payne County-adults and eggs up to 13 per leaf, heavy, in cotton at Perkins. (Arnold).

COTTON LEAFPERFORATOR (<u>Bucculatrix</u> thurberiella) - NEW MEXICO - Eddy County--larvae 1 per leaf in a 300-acre cotton field south of Carlsbad, 2 or more larvae per leaf in 40% of acreage. Damage early; frosts still predicted in 30-45 days. (Durkin). OKLAHOMA - Grady County--ranged 5-10 per row ft with much leaf damage to cotton week ending August 26. New county record: Payne County--up to 10 per row ft on cotton leaves at Perkins, September 1, 1977; collected and determined by J.H. Young. (Arnold).

#### MISCELLANEOUS FIELD CROPS

#### INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - TEXAS - Deaf Smith County--larvae in 90% of sunflower heads in 1 field August 22. (Patrick).

#### POTATOES, TOMATOES, PEPPERS

#### INSECTS

GREENHOUSE WHITEFLY (<u>Trialeurodes vaporariorum</u>) - OHIO - Franklin County--severely infested tomatoes, potatoes, and cucurbits. Older vines of most tomato plants necrotic and much of remaining growth wilted. Undersurfaces of leaves completely covered by sucking nymphs and adults. (Drees).

#### BEANS AND PEAS

#### INSECTS

MEXICAN BEAN BEETLE (<u>Epilachna</u> <u>varivestis</u>) - OHIO - Wayne and Franklin Counties--older bean plantings surveyed August 26 and 29, now completely skeletonized. Larvae (all sizes) and adults still active on later planted beans. (Drees).

BEAN APHID (Aphis fabae) - CALIFORNIA - Merced County--all stages, averaged 3 per sweep, on mature cowpeas at Delhi. (Swartzell).

#### COLE CROPS

#### INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ALABAMA - Lee County--1st to 3rd instar larvae averaged  $\overline{4}+$  per leaf of 6 to 8-inch collard, cabbage, and broccoli plants in gardens at Auburn. (Bond et al.).

CABBAGE WEBWORM (Hellula rogatalis) - CALIFORNIA - Fresno County--larvae damaged buds of young (3-4 inch) cauliflower at Sanger. Infested 10% of 160-acre field; treatment planned. (Dunnegan)

#### **GENERAL VEGETABLES**

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Western Sussex County--infested 30-50% of untreated peppers. (Burbutis, Kelsey).

## **DECIDUOUS FRUITS AND NUTS**

## INSECTS

PEACH TWIG BORER (Anarsia lineatella) - IDAHO - Twin Falls County--total of 93 adults in pheromone trap at Twin Falls, August 15-22. (Stoltz).

AN APHID (<u>Brachycaudus schwartzi</u>) - CALIFORNIA - New county record. San Joaquin County--nymphs and adults on leaves of peach at Linden, August 12, 1977. Collected by J. Solari. Determined by T. Kono. (Kono, Solari).

PEAR PSYLLA (Psylla pyricola) - OHIO - Franklin County--adults heavy on pear tree foliage in university orchard. Sooty mold heavy. Several trees with very few leaves and those in various stages of chlorosis. (Drees).

EUROPEAN RED MITE (Panonychus ulmi) - CALIFORNIA - Stanislaus County--increased after June treatment to 5-25 per walnut leaf on about 70% of host at Riverbank. (Swartzell).

PECAN WEEVIL (<u>Curculio caryae</u>) - TEXAS - Young County--first adult on pecans at Graham August 18. (Boring). OKLAHOMA - Love County--adults continued to emerge 40+ per pecan tree week ending August 29. Hughes County--currently 60-70 per pecan tree. (Arnold).

#### SMALL FRUITS

#### INSECTS

A LEAFHOPPER (Erythroneura elegantula) - PENNSYLVANIA - Erie County--nymphs averaged 10 per leaf on about 68% of foliage in 1 grape vineyard. (Jubb).

GRAPE LEAFFOLDER ( $\underline{\text{Desmia}}$  funeralis) - CALIFORNIA - Merced County-adult emergence heavy, 1-2 per plant, in 60-acre grape vineyard at Livingston. (Swartzell).

EUROPEAN RED MITE (Panonychus ulmi) - PENNSYLVANIA - Erie County-infestation and leaf bronzing 65% in 1 vineyard and 36% in second vineyard. (Jubb).

# **ORNAMENTALS**

#### INSECTS

A MEALYBUG (Antonina pretiosa) - FLORIDA - New county records for this species determined by A.B. Hamon and an ARMORED SCALE (Odonaspis penicillata) determined by L.A. O'Berry, confirmed by A.B. Hamon. Martin County--adults severely infested stems of Bambusa sp. (bamboo) at commercial building at Stuart. Collected by E.W. Campbell, July 24, 1977. (Mead).

A SOFT SCALE (Coccus acutissimus) - FLORIDA - New host records for State for this species and an ARMORED SCALE (Parlatoria proteus). Broward County--infested Eugenia luschnathiana (pitomba) plants in nursery at Davie, July 22, 1977. (Mead).

AN ARMORED SCALE (Pseudaulacaspis cockerelli) - FLORIDA - New host record for State. Martin County--all stages moderately infesting leaves on 10% of 100 Curculigo capitulata (palmgrass) plants at discount store in Stuart, August 23, 1977. (Campbell).

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) - FLORIDA - New host record for State. Pinellas County--immatures generally infested leaves of Columnea sp. in nursery at St. Petersburg, June 14, 1977. (Hickman).

BANDEDWING WHITEFLY (<u>Trialeurodes</u> <u>abutilonea</u>) - FLORIDA - New host record for State. Martin County--immatures moderately infested leaves of <u>Ambrosia artemisiifolia</u> (common ragweed) at Stuart, July 23, 1977. (Campbell).

#### FOREST AND SHADE TREES

#### INSECTS

SOUTHERN PINE BEETLE (<u>Dendroctonus frontalis</u>) - MISSISSIPPI - Oktibbeha County--first of season on June 11. Air survey conducted of forests yielded new infestation spots by county: Oktibbeha-- 12 and Noxubee--5. (Cook).

ORANGESTRIPED OAKWORM (Anisota senatoria) - MISSISSIPPI - Sharkey County--larvae of this species and PINKSTRIPED OAKWORM (A. virginiensis) infested 60,000 acres of Delta National Forest. Prefers white and scrub oak foliage but also feeds upon maple, hickory, birch, hazelnut, and other oak species. Defoliation about 30% from air checks on host trees. (Cook).

POPLAR TENTMAKER (Ichthyura inclusa) - MISSISSIPPI - Issaquena County--larval defoliation light to moderate on 30-40 acres of poplar trees. (Cook).

AN ARMORED SCALE (Chionaspis nyssae) - FLORIDA - New county record. Clay County--adults infested leaves on 3 Nyssa sylvatica (black gum) plants along roadside at Green Cove Springs. Collected by A.E. Graham and C.B. Lieberman, July 20, 1977. Determined by A.B. Hamon. (Mead).

## MAN AND ANIMALS

#### DISEASES

ST. LOUIS ENCEPHALOMYELITIS VIRUS - OHIO - Hamilton County-first virus isolate of season extracted from <u>Culex</u> mosquito collected at Cincinnati. One confirmed case in human. (Berry).

#### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - OKLAHOMA - Noble County-averaged 3,000 per head on cattle; Harper County--2,000 per head week ending August 29. (Arnold).

FACE FLY (Musca autumnalis) - OKLAHOMA - New county records taken on cattle. Logan County--near Langston June 20, 1977; Canadian County--at El Reno June 13; Oklahoma County--at Luther July 13; Lincoln County--8 miles north of Stroud July 14; and McIntosh County--at Hitchita July 14. All collected by J. Arends and determined by R. Wright. Osage County--4-5 per face on cattle week ending August 29. (Arnold). NORTH CAROLINA - Ranged from 5-10 per head to 70+ per head in 15 herds from Wake County to Macon County. Heaviest infestation still in Mountain and western Piedmont counties. (Hunt).

#### STORED PRODUCTS

## INSECTS

SAWTOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - CALIFORNIA - Fresno County--larvae and adults in dried apricots at Fresno; fumigation required. (Dunnegan).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

A BRACONID WASP (<u>Eubazus rotundiceps</u>) - OKLAHOMA - New State record. Payne County--single adult reared from <u>Magdalis</u> sp. (a weevil) in dead American elm twig at Stillwater, by D.C. Arnold, August 16, 1977. Determined by P.M. Marsh. (Arnold).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - American Canyon, Napa County; Santa Rosa, Sonoma County; and San Rafael, Marin County--new site confirmed at each for total of 3. Two trees largeleaf elms and tree at Santa Rosa is Siberian elm (Arciero).

#### INSECTS

GRASSHOPPERS - NEW MEXICO - Guadalupe County--heavily damaged several hundred acres of irrigated crops near Puerto de Luna. Bernalillo County--heavy populations and much damage. (Durkin, Heninger).

SCREWWORM (Cochliomyia hominivorax) - Total of 13 cases reported from continental United States July 31 to August 13 as follows: New Mexico 2, Arizona 11. (Meadows). Total of 457 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,947 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 237,607,700 as follows: Texas 165,623,000, New Mexico 13,653,000, Arizona 58,331,700. Total of 302,773,700 sterile flies released within Barrier of Mexico. (Williams, Smith).

# WEEDS

SPOTTED KNAPWEED (Centaurea maculosa) - CALIFORNIA - New county record. Tehama County--small infestation detected at Chester, August 21, 1977, by D. Wilson. Confirmed by D. Barbe. Eradication begun. (Keffer).

#### DETECTION

#### INSECTS

A THRIPS (<u>Dichromothrips corbetti</u> (Priesner)) - New record for PUERTO RICO - Females collected from <u>Vanda</u> cv. Miss Agnes Joaquim flowers at the botanical garden at Rio Piedras, July 12, 1977 by C.E. Miller and S. Nakahara. Determined by S. Nakahara. Vanda and other orchid flowers damaged. Reported from Ft. Myers, Florida, and known from Hawaii, India, Indonesia, Malaysia, Philippine Islands, Singapore, and Thailand. (Miller, S. Nakahara).

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A NOCTUID MOTH (Leucania sp. probably insecuta (Walker)) - Hawaii - Oahu Island. (p. 724).

NEW STATE RECORDS

#### INSECTS

A BRACONID WASP (Eubazus rotundiceps) - OKLAHOMA - Payne and Kootenai Counties. (p. 730).

#### WEEDS

VELVETLEAF (Abutilon theophrasti) - IDAHO - Payette County--sent from garden site in Payette, by M. Gardner, August 17. 1977. Determined by R.E. Higgins. Kootenai County--sent from garden site in Coeur d' Aline, by C.V. Slyke, August 17. Determined by G. Lee. These weeds can become agricultural production problems. (Higgins).

#### NEW COUNTY RECORDS

#### INSECTS

AN APHID (Brachycaudus schwartzi) - CALIFORNIA - San Joaquin. (p. 728).

AN ARMORED SCALE (Chionaspis nyssae) - FLORIDA - Clay. (p. 729).

AN ARMORED SCALE (Odonaspis penicillata) - FLORIDA - Martin. (p. 729).

COTTON LEAFPERFORATOR (<u>Bucculatrix</u> thurberiella) - OKLAHOMA - Payne. (p. 727).

FACE FLY (Musca autumnalis) - OKLAHOMA - Logan, Canadian, Oklahoma, Lincoln, and McIntosh. (p. 730).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - NEVADA - Elko. (p. 720).

A MEALYBUG (Antonina pretiosa) - FLORIDA - Martin. (p. 729).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - Santa Barbara and Solano. (p. 720).

A WEEVIL (Sphenophorus venatus) - ALABAMA - St. Clair. (p. 720).

WESTERN CORN ROOTWORM (<u>Diabrotica</u> <u>virgifera</u>) - OHIO - Morrow, Marion, and Crawford. (p. 719).

#### WEEDS

SPOTTED KNAPWEED (<u>Centaurea maculosa</u>) - CALIFORNIA - Tehama. (p. 731).

#### CORRECTIONS

CPPR 2(33):638 - CORN ROOTWORMS (Diabrotica spp.) - MINNESOTA - See page 719. (Sreenivasam).

CPPR 2(33):647 - SMALL FRUITS - Credit should be (Jubb) instead of (Kim).

CPPR 2(34):670 - H. zea and H. virescens larvae averaged 3,015 per 56 row ft ... should read ... 3-15 per 56 row ft.

CPPR 2(35):693 - MAYDIS CORNSTALK ROT (Diplodia maydis) - Change Western area to Macoupin County. (Jordan).

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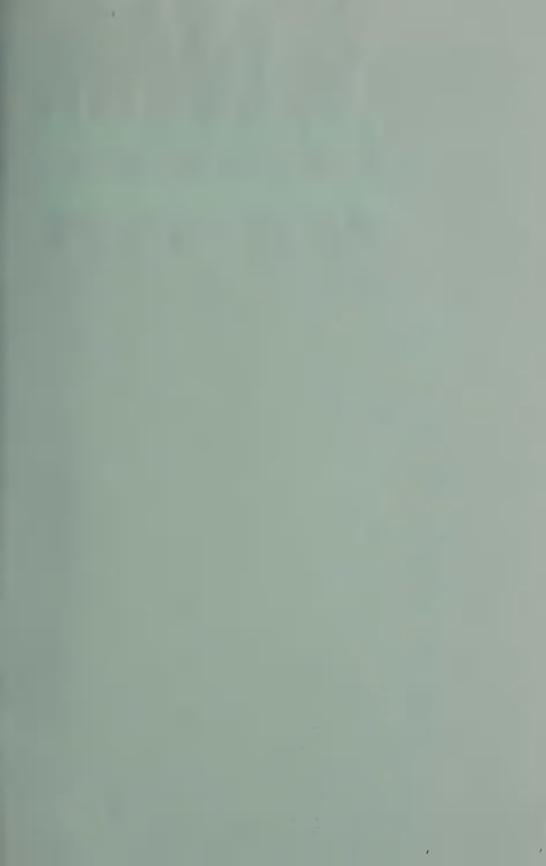
Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Anastrepha ludens (Loew) Mexican fruit fly Det. D.J. Provencher	larval	in oranges from baggage	Mexico	Laredo	CA
<pre>Cerambyx sp. a cerambycid beetle Det. D.M. Anderson</pre>	larval	in wood pallets with steel	France	New York	NY
Ceratitis capitata (Wiedemann) Mediterranean fruit fly Det. C.E. Miller	larval	in pears from baggage	Italy	San Juan	PR
Gelechia ericitella (Hübner) a gelechiid moth Det. R.S. Taylor	larval	with heather from baggage	United Kingdom	Detroit	MI
Neoleucinodes elegantalis (Gùenee) a pyralid moth Det. R. Higgins	larval	in naranjilla fruit from baggage	Ecuador	Miami	FL
Taeniothnips eucharii Whetzel a thrips Det. R. Munkittrick	adult	with Lycoris bulbs from cango	Japan	San Francisco	CA
Thrips major Uzel a thrips Det. R.S. Taylor	adult	with heather from baggage	Poland	Detroit	MI
Pieris brassicae (Linnaeus) large white butterfly Det. W.D. McLellan	pupal	on vans of household goods	Spain	New Orleans	USA







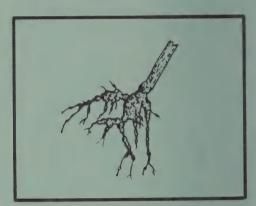
# UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service Hyattsville, Maryland 20782

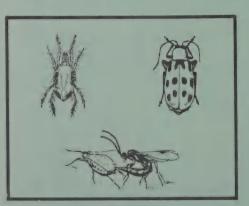
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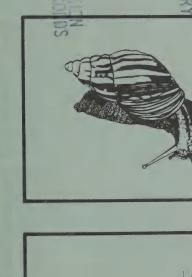
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**September 16, 1977** 

# Cooperative PLANT PEST

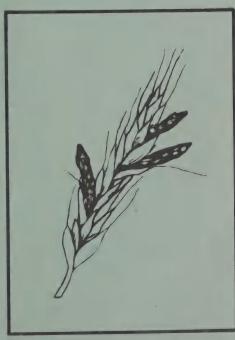
REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

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# **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

# Current Conditions

CORN EARWORM up to 20 per sorghum head in High Plains area of Texas. Problem on susceptible soybeans in parts of several States. Almost half of soybean fields treated in northeastern Arkansas; adults and eggs heavy in southeastern Missouri; larvae at threshold in eastern North Carolina; many susceptible fields in eastern Virginia; this species, FALL ARMYWORM and others very heavy in many susceptible soybean fields in eastern Maryland. (p. 737-738). Corn earworm adults 100+ per trap per night in Arkansas, Kansas, Mississippi, and North Carolina. (p. 751-752).

FALL ARMYWORM controls ineffective on corn in area of Maryland, destroyed young wheat field in northeastern Kentucky, damage to various crops in Virginia continued. (p. 741). Larvae 15 or more per sq ft of grasses in South Carolina and North Carolina (p. 742). Adults 100+ per trap per night in northeastern Ohio. (p. 751-752).

EUROPEAN CORN BORER larvae and adults very heavy in corn in parts of Nebraska in late August. (p. 740). Adults 100+ per trap per night in east-central Indiana. (p. 751-752). Possible third flight in Wisconsin. (p. 747).

MEXICAN BEAN BEETLE damaged soybeans in parts of northern Kentucky and northeastern Maryland. (p. 745).

#### Detection

A LATRIDIID BEETLE is new for North Dakota. (p. 750).

For new county and island records, see page 750.

Reports in this issue are for the week ending September 9 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

ARMYWORM (Pseudaletia unipuncta) - CALIFORNIA - Fresno County-heavy, up to 30 per sq yd of turf at Fresno. (Dunnegan). TEXAS - Pecos and Reeves Counties--this species, BEET ARMYWORM (Spodoptera exigua), FALL ARMYWORM (S. frugiperda), and YELLOW-STRIPED ARMYWORM (S. ornithogalli) up to 585 larvae per 50 sweeps of alfalfa September 2. (Foster).

CORN EARWORM (Heliothis zea) - TEXAS - Counts by county August 30 and September  $\overline{2}$ : Carson, Armstrong, Wheeler--damage economic on sorghum, Carson--10-20 per sorghum head (Patrick), and Pecos and and Reeves--80 per 50 sweeps of alfalfa (Foster). KANSAS - Kiowa, Pratt, Pawnee, and Greeley Counties--substantial adult flights in blacklight trap catches. Douglas County--larvae in sorghum heads (bloom to mature) averaged 0-0.2 per head in 6 fields. (White).

ARKANSAS - Northeastern area--H. zea and TOBACCO BUDWORM (H. virescens) active on soybeans in Mississippi County where almost half of the fields treated (Barnes), but Heliothis pressure somewhat less than expected in other counties of this northeastern area (Kimbrough). Southeastern area--Heliothis pressure on late soybeans may increase soon, total of  $\overline{1,500~\text{Heliothis}}$  adults in ultraviolet light trap in Chicot County. (Wall). MISSOURI - Cape Girardeau and Scott Counties--H. zea adults heavy in soybean fields. Eggs heavy on late-planted soybeans, 1-4 in terminals of 90% of plants in 2 fields. (Munson).

TENNESSEE - Acres damaged (and treated) by county for  $\underline{H}.$   $\underline{zea}:$  Anderson--300 (50) on corn, Cannon--2,000 (200) on  $\underline{corn}$ ,  $\underline{Carroll--15,000}$  (10,000) on soybeans, Chester--2,500 (0) on corn and 20,000 (15,000) on soybeans, Claiborne--150 (200) on field corn and 50 (50) on sweet corn, Davidson--500 (0) on corn, Dyer--50,000 (20,000) on soybeans, Fayette--6,000 (6,000) on soybeans, Fentress--300 (200) on snapbeans and 1,000 (200) on corn, Giles--1,500 (1,000) on soybeans and 500 (0) on corn, Hawkins--150 (100) on corn, Houston--1,000 (0) on corn, Lauderdale--35,000 (10,000) on soybeans, Macon--500 (0) on corn and 500 (0) on soybeans, Marshall--300 (100) on corn, Montgomery--all late corn (0), Morgan--3,500 (0) on corn, 350 (0) on soybeans, and 2,000 (0) on vegetables, McNairy--2,000 (6,000-8,000) on soybeans, Perry--300 (40) on corn, Putnam--45 (0) on corn, Stewart--300 (0) on corn, and Washington--500 (300) on corn. (Ivens et al.).

Tennessee - Acres damaged (and treated) by county for H. zea and FALL ARMYWORM (Spodoptera frugiperda): Bledsoe--4,000  $\overline{(2,000)}$  on corn, Coffee--600 (0) on corn, Henderson--15,000 (12,000) on soybeans, Hickman--500 (300) on corn, Lawrence--1,000 (400) on corn and 18,000 (15,000) on soybeans, Lincoln--3,000 (unknown) on corn, Scott--50 (0) on corn, Sevier--100 (50) on corn, Sullivan--200 (100) on corn, and Weakley--250 (100) on corn and 20,000 (15,000) on soybeans. (Austin et al.).

NORTH CAROLINA - Johnston, Edgecombe, and Wilson Counties--Heliothis zea larvae reached threshold of 2 per ft of row in some late soybean fields, 3 per ft in 2 of 10 fields. This generation usually insignificant on soybeans but potential for more than usual damage exists for fields with tender foliage and/or blooms (mainly late-planted or late-maturing fields). (Hunt, Van Duyn).

VIRGINIA - H. zea populations decreased somewhat, being between generations. Nansemond County--adults in light traps at Holland indicated a low of 4-6 per night few nights ago, but now back to 15-20 per night. Eastern area--adult counts could increase sharply next few days; many soybeans with blooms and young developing beans or open canopies highly susceptible. Southeastern area-damage to soybeans heavy in Greensville County. Damage usually more serious where cotton associated in crop rotation. Adult counts at Holland atypical of those reported at Painter. Accomack County--blacklight trap September 3-5 at Painter caught 2,555 adults, compared with 19-year average of 657 for an entire season. Eastern Shore will experience 1 more serious infestation on susceptible crops about mid-September. (Allen).

MARYLAND - All Eastern Shore counties--H. zea along with Spodoptera frugiperda, BEET ARMYWORM (S. exigua), and ARMYWORM (Pseudaletia unipuncta) very heavy on soybeans especially in Worcester, Somerset, Wicomico, and Dorchester Counties. High probability of infestation in fields which bloomed after August 1. Southern counties on western shore--scattered economic infestations but problems generally less severe due to high percentage of early maturing acreage. (Hellman, Pinto).

POTATO LEAFHOPPER (Empoasca fabae) - NEW JERSEY - Adult and nymphal averages per 25 sweeps of alfalfa by county August 30 (and September 6): Burlington-28 (46) at Columbus and 121 (81, recently mowed) at Bordentown; Mercer--106 (118) at Yardville; Monmouth--101 (62, recently mowed) at Allentown and 98 (64, recently mowed) at Clarksburg, (Vasvary).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - Statewide--still most widespread corn disease. More obvious in northern area as corn in southern area near maturity. Washington, Republic, and Graham Counties--prevalence 30-100%. (Sim). IOWA - Prevalence 99%/severity as stated in surveyed corn fields (physiologic maturity) by county week ending September 2: Boone--trace, Franklin--1-10%, Marshall--5%, Kossuth--10-15%, Palo Alto--5-10%, Calhoun--1-10%, and Webster--10%. (Williams). INDIANA - Corn (all kernels dented) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 59%/severity 2%, maximum 99% 10%. (Schall).

OHIO - Common maize rust prevalence/severity on field corn (all kernels dented) by county week ending September 2: Ashland--30%/trace, Ashtabula--100%/trace, Knox--100%/trace to 5%, and Trumbull--100%/5-10%. Current prevalence severity in corn (all kernels dented): Crawford--100%/trace to 5%, Delaware--100%/trace

to 5%, Henry--100% trace to 5%, Paulding--100% 5%, Van Wert--100% trace to 5%, Wood--100% trace, and Williams--100% trace to 5%. (Hite).

COMMON SMUT (Ustilago maydis) - KANSAS - Washington and Clay Counties (north-central area)--prevalence 1-5% in corn fields. (Sim). IOWA - Prevalence in surveyed corn fields (physiologic maturity) by county week ending September 2: Boone--12%, Franklin--trace, and Marshall--5-10%. (Williams). INDIANA - Corn (all kernels dented) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 4%, maximum 16%. (Schall). OHIO - Prevalence on field corn (all kernels dented) by county week ending September 2: Ashland--trace, Ashtabula--2%, Erie--3%, Knox--2%, and Trumbull--3%. Current prevalence in corn (all kernels dented): Crawford--2%, Delaware--3%, Henry--3%, Paulding--5%, Wood--3%, and Williams--2%. (Hite).

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - INDIANA - Corn (all kernels dented) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 19%/severity 4%, maximum 90% 10%. (Schall). OHIO - Prevalence/severity on field corn (all kernels dented) by county week ending September 2: Knox--20% 5% and Trumbull--5%/trace. (Hite).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - IOWA - Grundy County--prevalence trace/severity 5-10% in 1 corn field (physiologic maturity) week ending September 2. (Williams). WISCONSIN - Dane County--detected in 2 inbred lines of seed corn at 2 separate sites week ending September 2. Prevalence trace/severity trace on leaf tips. Absent on commercial hybrids this year. (Lovett).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - INDIANA - Corn (all kernels dented) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 8%/severity 4%, maximum 28% 10%. (Schall). OHIO - Prevalence/severity on field corn (all kernels dented unless stated otherwise) by county week ending September 2: Harrison--50% trace (few kernels dented), Knox--90% 5-10%, Licking--100%/30%, Mahoning--50% trace, Perry--100%/50% in 1 field and 100%/25% in second field. (Hite).

ROSEUM ROT (Gibberella roseum f.sp. cerealis) - KANSAS - Prevalence of stalk rot in corn (nearing maturity) by county: Jefferson--90% and Atchison--25%. (Sim).

KABATIELLA EYESPOT (Kabatiella zeae) - WISCONSIN - Dane County-prevalence 64% and 77%, respectively, in 2 inbred lines of seed corn at separate sites week ending September 2. Severity averaged 1% or less, some plants heavily infected. (Lovett).

PALLESCENS LEAF SPOT (Curvularia pallescens) - KANSAS - Allen and Washington Counties--prevalence about 20% in single corn fields. (Sim).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Prevalence on corn plants by county: Jefferson--50% and Atchison--3%. (Sim).

MAYDIS CORNSTALK ROT (Diplodia maydis) - KANSAS - Atchison County--prevalence 8% on corn plants. (Sim).

STEWART'S WILT (Erwinia stewartii) - INDIANA - Corn (all kernels dented) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 7%/severity 1%, maximum 22% 2%. (Schall). OHIO - Prevalence/severity on field corn (all kernels dented) by county week ending September 2: Ashland--5%/trace to 5%; and Ashtabula--100% 25-50% on lower leaves, scattered lesions on uppermost leaves. (Hite).

BACTERIAL STRIPE (Pseudomonas andropogonis) - OHIO - Prevalence/ severity on field corn (all kernels dented) by county week ending September 2: Perry-10%/trace and Trumbull--100% 30%. (Hite).

MAIZE DWARF MOSAIC VIRUS (MDMV) - SOUTH DAKOTA - New county records. Yankton County--prevalence 40-50% in 2 late-planted Sorghum vulgare (sorghum) fields 13 miles north of Yankton; Minnehaha County--prevalence trace in 1 sorghum field 10 miles north of Sioux Falls. Both collected by V. Jons, August 30, 1977. Both determined by W. Gardner. MDMV previously found in sorghum in State in 1972. (Jons).

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Clay and Gray Counties -- heavy infestations caused serious damage to corn in 1 field each. (Gates, Brooks). Haskell County--egg masses averaged 4-5 per plant on late sorghum in 1 field week ending September 2. (Bucl, Brooks). Marion County--about 25% stalks of sorghum (soft dough) infested in 1 field; some head breakage. (Brooks). NEBRASKA - Northeast, central, and east districts: second generation larvae very heavy in some areas August 26. Washington County--larvae averaged 15 per corn plant, 35% of plants broken above the ear and 15% below the ear in 1 field. Stalks purple due to accumulation of sugars caused by severed vascular tissue. Larvae averaged 10 per plant with 5% of plants broken above the ear and less than 1% broken below the ear in 2 other fields. (Keith). Second generation larvae pupated in these districts. Light trap in Hamilton County attracted 12,000+ adults August 17-23, third flight peak recorded at trap this year and separated from second generation flight peak by about a month, indicating partial third generation. (Witkowski et al.). PENNSYLVANIA - Averages per 5 corn plants (and number of fields) by county: Montgomery--7 (1), Lawrence--4 (3), and Crawford--1 (2). (Travis et al.).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - East-central area--late corn and grain sorghum fields heavily damaged. Adults and larvae still present. (Anderson). TENNESSEE - Acres damaged (and treated) by county: Bradley--600 (250) on corn, Cocke--200 (50) on corn, Carter--200 (25) on corn, Claiborne--10 (200) on corn, Davidson--500 (100) on corn, Fayette--150 (150) on milo, Henry--10 (5) on late corn, Houston--200 (100) on corn, Marshall--400 (300) on late corn, McNairy--all late corn (0), Perry--50 (0) on sorghum, Polk--100 (30) on corn, Putnam--20 (20) on sorghum,

Robertson--600 (200) on corn, Smith--100 (50) on corn, Stewart--100 (0) on corn, Trousdale--100 (50) on sorghum, and Washington--600 (300) on corn. (Hale et al.). WEST VIRGINIA - Jefferson County--fall armyworm larvae damaged 80% of ears in some fields of late-planted field corn. (Hacker). MARYLAND - Central counties-infested late-planted corn (silk). Frederick County--infested 100% in 200 acres; controls ineffective. (Hellman, Pinto).

WESTERN BEAN CUTWORM (Loxagrotis albicosta) - NEBRASKA - Dawson County--infested 0-33% of plants, average of 1 larva still in ears, in 8 corn fields August 25. (Keith, Raun).

SORGHUM WEBWORM (Celama sorghiella) - ARKANSAS - Northeastern area--larvae up to 20 per head in many late-blooming sorghum fields. (Kimbrough).

CORN ROOTWORMS (Diabrotica spp.) - NEW MEXICO - New county records for WESTERN CORN ROOTWORM (D. virgifera) on corn. Socorro County-collected at Socorro by J. Durkin July 23, 1975. Determined by R.E. White. (Durkin). Curry County--adults collected near Clovis by J. Campbell, September 1, 1977. Determined by J. Owens. (Owens). WISCONSIN - Dane County--up to 24 Diabrotica spp. adults per plant on late sweet corn week ending September 2. (Lovett). OHIO - NORTHERN CORN ROOTWORM (D. longicornis) females returning to corn fields to begin egg laying, expected to continue until first killing frost. Wayne County--eggs 50-75 per pint of soil in corn field, adults heavy. (Szatmari-Goodman et al.).

SORGHUM MIDGE (Contarinia sorghicola) - ARKANSAS - Northeastern area--a-ove treatment level in many late-blooming sorghum fields. (Kimbrough). MISSISSIPPI - Noxubee and Kemper Counties--adults averaged 1.3 per grain sorghum head (bloom stage). (Anderson).

GRASSHOPPERS - ILLINOIS - Statewide--mainly Melanoplus femurrubrum generally heavier than in 1976. Damage to field crops avoided due to heavy rain in August which kept grassy roadsides and pastures green. Averages per sq yd of corn by district (3-5 counties each, 10 samples per county) week ending September 2: Northwest--2.5, northeast--8.0, west--3.8, central--3.2, east--3.4, west-southwest--6.1, east-southeast--5.0, southwest 4.8, and southeast--4.8. (Black).

#### SMALL GRAINS

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Acres damaged (and treated) by county: Macon--completely destroyed 20 acres of rye and Trousdale--150 (50) on small grains. (Breeding, Webster). KENTUCKY - Bourbon and Harrison Counties--larvae nearly destroyed 5 to 6-inch wheat cover crop in 2.5-acre field on border between counties. (Scheibner). VIRGINIA - Statewide--widespread damage to early planted rye, alfalfa, corn, sudex, and fescue pastures in Madison, Westmoreland, Bedford, Amelia, Nottoway, Montgomery, Cumberland, Augusta, and Albemarle Counties this period. Larvae 0.125-1.25 inches long. Severe economic damage where numbers moderate to heavy. Westmoreland County--first serious counts detected about September 5 with 3-8 larvae per sq ft common. Accomack County--light traps, September 3-5, at Painter caught 4,248 adults, more than 4 times the 19-year average for the entire season. (Allen).

PALE WESTERN CUTWORM (Agrotis orthogonia) - KANSAS - Greeley County--first adult flight of season detected by blacklight trap at Tribune on September 1. (Gwin, Martinez).

# TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - ALABAMA - Talladega County--various instar larvae continued to infest most lawn grasses. (O'Daniel). TENNESSEE - Acres damaged (and treated) by county: Davidson--200 (60) on pasture and Marshall--200 (many) on lawns. (Knight, Brewer). SOUTH CAROLINA - Pickens County--larvae 15 per sq ft on 10 acres of pasture. (Griffin). NORTH CAROLINA - From mountains to coast area--still very heavy on tender sorghum, sudex grasses, road shoulders, and fescue pastures. All stages in Wake, Durham, Harnett, and Franklin Counties. Piedmont area-larvae 20-30 per sq ft of soil surface in 5 counties. Larvae 5 per plant in 10 acres of late silage sorghum. Damage 100% in 15 late sorghum fields from Wake to Macon Counties September 3, infestations 70+% in 10 of these fields. Damage to tender grass expected until frost. (Hunt, Hodges).

#### FORAGE LEGUMES

#### DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - North-central area--continued to infect alfalfa. Prevalence by county: Republic--80%, Jewell--50%, and Clay--50%. (Sim).

LEPTOSPHAERULINA LEAF SPOT (Leptosphaerulina briosiana) - KANSAS - Jewell County--prevalence 20% in l alfalfa field. (Sim).

ALFALFA BACTERIAL LEAF SPOT (Xanthomonas alfalfae) - KANSAS - Clay County--prevalence 80% in 1 alfalfa field. (Sim).

# INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Alfalfa acres damaged (and treated) by county: Marshall--150 (150) and Putnam--20 (20) on alfalfa. (Brewer, Luna). KENTUCKY - Bourbon and Henderson Counties--larvae heavily damaged spring-seeded alfalfa. (Gregory, Raney). Hardin County--larvae heavy in an alfalfa field. (Snyder). Henry County--larvae quickly destroyed 15-acre spring-seeded alfalfa field. (Scheibner).

GARDEN WEBWORM (Loxostege rantalis) - MARYLAND - Caroline County-defoliated 12 acres of alfalfa 14 days before harvest at Denton, larvae 4-8 per sq ft, and controls applied. (Hellman, Pinto).

#### SOYBEANS

#### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - KANSAS - Washington County--prevalence 10% in 1 soybean field. (Sim). IOWA - Prevalence/severity in surveyed soybean fields (physiologic maturity) by county week ending September 2: Boone--trace/5% and

Franklin--99% 2%. (Williams). INDIANA - Soybeans (beans full size) with soybean brown spot in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalance 34%/severity 2%, maximum 90%/10%. (Schall). OHIO - Prevalence severity in soybeans (pods growing unless otherwise stated) by county week ending September 2: Ashland--100%/10%, Erie--100%/5-10%, Knox--100%/10-15% (beans full size), Mahoning--100%/5-10%, and Perry--100%/10-15%. Current prevalence severity in soybeans (beans full size): Crawford--100%/10-15%, Delaware--100%/15%, Henry--100%/15%, Paulding--100%/5%, Van Wert--100%/5-10%, Williams--100%/10-15%, and Wood--100%/15-20%. (Hite).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 61%/severity 2%, maximum 99%/10%. (Schall). MICHIGAN - Prevalence/severity in soybeans (and growth stage) by county: Van Buren--20%/5% (physiologic maturity), Washtenaw--50%/25% (physiologic maturity), and Monroe--15%/2% (harvest maturity). (Singh).

OHIO - Soybean downy mildew prevalence/severity in soybeans (and growth stage) by county week ending September 2: Ashland--100%/trace (pods growing), Knox--100%/trace to 5% (beans full size), Perry--100%/trace to 5% (pcds growing). Current prevalence severity in soybeans (beans full size): Crawford--100% trace to 5%, Paulding--100%/trace to 5%, Van Wert--100%/trace to 5%, Williams--100%/5%, and Wood--100%/trace to 5%. (Hite).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - WISCONSIN - Green Lake County--about 50% of leaves lightly infected in lush, badly lodged soybean field. (Lovett). INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 8%/severity trace, maximum 70%/1%. (Schall). MICHIGAN - Prevalence/severity in soybean plants (physiologic maturity unless otherwise stated) by county: Van Buren--5%/10%, Washtenaw--1% 30%, Monroe--2% 50% (harvest maturity), and Bay--trace/0. (Singh).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - KANSAS - Franklin and Cherokee Counties--prevalence trace in soybeans, first of season in State. (Sim). IOWA - Prevalence/severity in surveyed soybean fields (physiologic maturity) by county week ending September 2: Boone--2%/10%, Franklin--20%/50-90%, and Kossuth--50%/10-20%. (Williams). INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence trace, maximum trace. (Schall).

SOYBEAN STEM CANKER (Diaporthe phaseolorum var. caulivora) - OHIO - Prevalence in soybeans (and growth stage) by county week ending September 2: Ashland--1% (pods growing); Erie--trace (pods growing); Knox--25-35% in 2 fields same farm, 1% and 5% in 2 fields of adjacent farm, not typical of county (beans full size); Wayne--trace (beans full size). Current prevalence in soybeans (beans full size): Delaware--10%, Paulding--1%, Van Wert--1-5%, and Williams--2%. (Hite).

BROWN STEM ROT (Phialophora gregata) - IOWA - Prevalence in surveyed soybean fields (physiologic maturity) by county week ending September 2: Kossuth and Story--10% and Webster--70%. (Williams). INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 1%, maximum 5%. (Schall).

SCLEROTIORUM ROT (Sclerotinia sclerotiorum) - MICHIGAN - Stem rot prevalence/severity in soybeans (physiologic maturity) by county: Saginaw-80%/70% and Shiawassee--2%/1%. (Singh).

PHYTOPHTHORA ROOT AND STEM ROT (Phytophthora megasperma var. sojae) - OHIO - Prevalence in soybeans (and growth stage) by county: Perry-1% (pods growing) week ending September 2; currently, Crawford-3% (beans full size) and Henry-2-5% (beans full size). (Hite).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - MICHIGAN - Prevalence/severity in soybeans (physiologic maturity) by county: Van Buren 10%/2% and Washtenaw--trace. (Singh).

FROGEYE LEAF SPOT (Cercospora sojina) - INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence trace, maximum trace. (Schall).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS - Statewide--still most widespread soybean disease. Washington and Clay Counties (north-central area)--prevalence 80-100% in soybean fields. (Sim). INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 8%/severity trace, maximum 70% 1%. (Schall). OHIO - Prevalence/severity in soybeans (and growth stage) by county week ending September 2: Ashland--100%/trace to 5% (pods growing), Knox--100%/trace to 5% (beans full size), and Mahoning--100%/5% (pods growing). Current prevalence/severity in soybeans (beans full size) by county: Van Wert--100%/5% and Wood--100%/5%. (Hite).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - KANSAS - Clay County--prevalence 80% in 1 soybean field. (Sim).

SOYBEAN MOSAIC VIRUS - INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 1%, maximum 1%. (Schall).

TOBACCO RING SPOT VIRUS - INDIANA - Soybeans (beans full size) in Tippecanoe, White, Jasper, Porter, La Porte, St. Joseph, Marshall, Fulton, and Cass Counties--average prevalence 1%, maximum 1%. (Schall).

## INSECTS

GREEN CLOVERWORM (Plathypena scabra) - MISSOURI - Cape Girardeau and Scott Counties--adults heavy in soybean fields. Very small larvae 0-7 per ft of row in all fields checked. (Munson). WISCONSIN - Most soybeans (pods filled and turning brown) in Dane, Rock, Sauk, Fond du Lac, Winnebago, and Green Lake Counties--3-11

green cloverworm larvae per ft of row; Sauk County--about 30% defoliation at Spring Green area. Significant yield loss expected in later fields. (Lovett).

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Soybean acres damaged (and treated) by county: Chester--20,000 (15,000), Dyer--600 (400), Hickman--100 (0), Houston--250 (0), Lewis--34 (0), and Stewart--200 (0). (LeCornu et al.). SOUTH CAROLINA - Greenwood County--new generation appears to be "hatching out" on soybeans. (Douglass).

BEET ARMYWORM (Spodoptera exigua) - ARKANSAS - Central and south-eastern areas--control on soybeans generally unsuccessful. (Barnes). MISSISSIPPI - Sharkey County--larvae 0-10 per row ft of soybeans on 5,000 acres. (Corban).

SOYBEAN LOOPER (Pseudoplusia includens) - SOUTH CAROLINA - Calhoun County--up to 4 per row ft on 40 acres of soybeans, controls recommended. (Griffin).

MEXICAN BEAN BEETLE (Epilachna varivestis) - KENTUCKY - Ohio River Bottom areas--adults and larvae continued to damage soybeans. Damaging populations noted in Meade, Breckinridge, Trimble, Daviess, Hancock, and Henderson Counties. Population heavy outside river bottom area in Caldwell County. (Raney). MARYLAND - Kent and Cecil Counties--economic here only, 1,000+acres sprayed. Pediobius foveolatus (a eulophid wasp) heavy levels in all release areas. (Hellman, Pinto).

## HAWAII PEST REPORT

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) infestations and damage heavy (75-95% of leaves infested, 30-100+ mines per leaf) on 0.25 acre of sweet pepper at Lualualei, 0.25 acre of watermelon (75-90% of leaves heavily mined) at Mikilua, and on 2 acres of green onion (40-60% of leaves heavily mined) at Waianae Valley, Oahu. Heavy infestations and foliar damage by larvae of DIAMONDBACK MOTH (Plutella xylostella), 5-15 per plant, and CABBAGE WEBWORM (Hellula rogatalis), 1-2 per plant, on 0.25 acre of daikon at Lualualei. WESTERN FLOWER THRIPS (Frankliniella occidentalis) light (25-50% of plants, 1-2 thrips per plant) on Manoa lettuce (2.5 acres) at Lualualei. Symptoms of TOMATO SPOTTED WILT VIRUS (transmitted by F. occidentalis) in some of these lettuce fields. Prevalence about 25% in a 5,000-sq-ft section; section now abandoned. (Nagamine, L. Nakahara).

Miscellaneous - New island records. A NOCTUID MOTH (Anua indiscriminata) - Lanai Island--1 adult collected at light at Lanai City by A. Morita, August 6, 1977. Determined by G. Taniguchi. (Kahoohalahala). A MANTID (Hierodula patellifera) - Oahu Island--1 adult and 1 nymph collected during joint survey at Hickam Air Force Base by J. Beardsley, R. Kunishi, W. Nagamine, H. Tenney, and L. Nakahara, August 30, 1977. Determined by J. Beardsley. First collection of this mantid since 1924 on Kauai Island. (L. Nakahara).

## COTTON

## INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Counts on cotton by county August 26 to September 2: Mitchell and Scurry-damaged squares 0-70% (mean 20-30%); Howard-infested fields 62%; punctured squares 0-65 per 100 plants; St. Lawrence area-infested fields 25%; Ector--1 adult trapped. Mean per acre, % of fields with punctured squares, % (and mean) of punctured squares by county: Kent in control zone--275, 90%, 0-73% (21.4%); Kent outside control zone--1,150, 100%, 32-100% (57.1%); and Stonewall outside control zone--1,200, 100%, 20-81% (54.9%). (Leser et al.). ARKANSAS - Southeastern area-numbers still relatively light on cotton. Many growers did not apply diapause control, may lead to heavy overwintering populations. (Wall). MISSISSIPPI - Punctured cotton squares by county: Montgomery--10% on 1,100 acres, Webster--5% on 100, Newton--5% on 80, Yalobusha--12% on 5,000, Itawamba--2% on 1,200, Madison--4% on 2,600, Monroe--3% on 1,000, and Holmes--12% on 500. (Anderson).

BOLLWORMS (Heliothis spp.) - TEXAS - BOLLWORM (H. Zea) and TOBACCO BUDWORM (H. virescens) counts on cotton by county August 30 to September 2: Crosby and Floyd-eggs 4-65, larvae 0-30, and damaged squares 0-20% per 100 plants; South Plains area-eggs 0-100, larvae 0-70, and damaged squares 0-30 per 100 plants; Wheeler-mean of 2-5% damage; St. Lawrence area-eggs 0-19 (mean 4), larvae 0-7 (mean 1), and punctured squares 0-15% (mean 4%) per 100 terminals; Pecos and Reeves-eggs 0-70, larvae 0-13, and punctured squares 26 per 100 terminals; El Paso-eggs 15-20% and damaged squares less than 5%; and Martin, Howard, Glasscock, Upton, and Reagan-eggs 5-20 per 100 terminals in most fields (15-40 in few fields), larvae 0-5 and damaged squares 3-7 per 100 plants. (Neeb et al.).

LOUISIANA - Statewide <u>H</u>. <u>zea</u> and <u>H</u>. <u>virescens</u> still heavy in some fields of late-planted cotton. Bolls damaged in some older fields with larger larvae not killed by insecticides. Larval control difficult in areas of daily rains. Red River Valley-<u>H</u>. <u>zea</u> and <u>H</u>. <u>virescens</u> egg laying increase expected by September 9; northeastern area-same increase expected by September 16. <u>H</u>. <u>virescens</u> high percentage of larvae past 14-21 days, will make up high percentage of next generation. Excessive boll damage in some fields; if rains continue, more will be damaged. (Tynes).

MISSISSIPPI - Cotton finishing statewide; some picking underway. Heliothis spp. larvae still in green cotton. Eggs on green terminals up to 150% in some areas. Larval infestations by county: Webster-3% on 100 acres, Yalobusha-12% on 5,000, Sharkey--6% on 1,000 with 0-20% eggs, Quitman--10% on 2,000 with 35% eggs, Newton--20% on 80, Montgomery--3% on 1,100 with 4% eggs, Monroe--5% on 1,000, Madison--8% on 2,600, Itawamba--5% on 1,200, and Holmes--12% on 500. (Anderson). ARKANSAS - Southeastern area--H. zea and H. virescens eggs up to 200 per 56 row feet where cotton plants green; may be problem on about 20% of cotton. (Wall). ALABAMA - Northern area-2-60 larvae per 100 stalks in most cotton fields. Statewide--H. zea and H. virescens adults now noted. (McQueen).

TENNESSEE - Heliothis zea adult flight continued; peak of this flight should have occurred by now. Populations still at or above control levels on late rank cotton. (Patrick et al.). Cotton acres damaged (and treated) by county: Dyer--H. zea on 4,000 (2,000), Henderson--H. zea and FALL ARMYWORM (Spodoptera frugiperda) on 1,000 (850), Lincoln--H. zea and S. frugiperda on 3,000 (3,000). (Lloyd et al.). SOUTH CAROLINA - Sumter, Marlboro, Dillon, and Florence Counties--H. zea and H. virescens larvae still in some cotton fields, many growers stopped treatment. (Kissam).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Noxubee, Lowndes, Winston, and Clay Counties--adults still present in cotton fields. Egg masses readily found. Larvae, 3rd to 4th instar, migrated from grass to cotton in Noxubee County, damaged maturing bolls, and treated. (Anderson). TENNESSEE - Chester County--2,400 cotton acres damaged (1,200 treated). (LeCornu).

CABBAGE LOOPER (<u>Trichoplusia ni</u>) - ALABAMA - Lee and Talladega Counties--infestations very heavy in many cotton fields. Virus or other diseases bringing infestations under control. (O'Daniel et al.).

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH CAROLINA - Wayne County--larvae damaged cotton bolls, entered near bracts, in 6 to 7-acre test plot. Infested 15-20% of bolls, heaviest on bottom half of plants. Infestation seem to cause premature opening of bolls. (Hawkins).

COTTON LEAFPERFORATOR (<u>Bucculatrix</u> thurberiella) - TEXAS - Pecos and Reeves Counties--larvae 27 per 3 fruiting cotton nodes September 2. (Foster).

## POTATOES, TOMATOES, PEPPERS

## INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - OHIO - Wayne County--adults heavy in potato field with green stems and leaves. Only 2 larvae on 24 plants; adults up to 150 per plant. Up to 14 adults per potato fed on uprooted tubers in nearby plowed field. (Dix).

## BEANS AND PEAS

## DISEASES

ANTHRACNOSE (Colletotrichum spp.) - TENNESSEE - Fentress County-seedborne fungal disease destroyed 130 acres of Cascade variety bush beans. Cumberland County-destroyed 20 acres. (Roden, Sauve).

## INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - WISCONSIN - Columbia County--67 adults in blacklight trap at Arlington September 1 for significant third flight of adults, rare in State. Adults possibly from larvae that failed to enter diapause early in August. Northern Dane County--5th instar larvae infested about 1-2% snap beans pods. (Lovett).

## DECIDUOUS FRUITS AND NUTS

## INSECTS

CODLING MOTH (Laspeyresia pomonella) - WASHINGTON - Pheromone trap catches by county: Chelan--averaged 1 (ranged 0-6) per trap in 88 traps week ending August 20 and averaged 0.2 (ranged 0-3) per trap in 80 traps week ending August 27 (Rushmore); Spokane-erratic, averaged 2 (ranged 0-16) per trap at Green Bluff week ending August 26 (Bosley); Grant--averaged 0.75 (ranged 0-4) per trap in 36 acres near Royal Slope; and Grant and Adams Counties-averaged 0.08 (ranged 0-1) per trap at 28 sites outside of Royal Slope week ending August 26 (Hunter). IDAHO - Twin Falls County-12 males in pheromone trap August 22-29 at Twin Falls. (Stoltz).

PEACH TWIG BORER (Anarsia lineatella) - IDAHO - Twin Falls County--31 males in pheromone trap August 22-29 at Twin Falls. (Stoltz).

EUROPEAN RED MITE (<u>Panonychus ulmi</u>) - OREGON - Polk County--all stages heavy on <u>Rosa sp.</u> (rose) in fence row adjacent to early Milton prune orchard at west Salem. This overwintering site could provide important source of reinfestation in 1978. Light on hawthorn, prune, and chokecherry in fence row. (Mellott).

## SMALL FRUITS

## INSECTS

A CERAMBYCID BEETLE (Xylocrius agassizi) - OREGON - Polk County-localized damage to 30-acre commercial gooseberry planting near west Salem. Symptoms include reduced plant stature and leaf size, and flagged branches. Wide range of instars, including prepupae and pupae, noted September 1. Larvae 8-21 per plant. Last report of damage in 1955 and occurred then in same general geographic area. No chemicals currently registered for control. (Penrose).

## FOREST AND SHADE TREES

## DISEASES

OAK WILT (<u>Ceratocystis fagacearum</u>) - TENNESSEE - Robertson County-first of season in this county, killed 11 trees of red oak group. (Melton).

## MAN AND ANIMALS

## INSECTS

HORN FLY (<u>Haematobia</u> <u>irritans</u>) - NEBRASKA - Lincoln and Dawson Counties--adults averaged 500+ per head on untreated cattle. (Campbell). MISSISSIPPI - Oktibbeha, Lowndes, Noxubee, and Winston Counties--fewer than 100 adults per head of cattle. (Anderson).

FACE FLY (<u>Musca autumnalis</u>) - ARKANSAS - New county record. Stone County-moderate on cattle at Mountain View, July 9, 1977. Collected by J.W. Shannon. Determined by E.P. Rouse. (Mayse). NEBRASKA - Lincoln and Dawson Counties--averaged 5 per face on untreated

cattle. (Campbell). WISCONSIN - Brown County--about 5 face flies per face on dairy cattle. (Lovett). MISSISSIPPI - Oktibbeha, Lowndes, Noxubee, and Winston--fewer than 3 adults per face on cattle. (Anderson).

STABLE FLY (Stomoxys calcitrans) - NEBRASKA - Lincoln and Dawson Counties--averaged 10 per leg on untreated cattle. (Campbell). WISCONSIN - Brown County--counts 10 per side, annoying some dairy herds. (Lovett).

## FEDERAL AND STATE PROGRAMS

## INSECTS

GRASSHOPPERS - WASHINGTON - Melanoplus spp. 8 or more per sq yd on 62,000 acres in eastern counties August 24: Ferry--23,800, Okanogan--8,500, Garfield--7,600, Stevens--7,800, Columbia--2,000, other infested areas--much smaller acreages. (Harwood). NEVADA - Elko County--1977 adult survey indicated potential infestations for 1978 on 2,000 rangeland acres in Coon Creek Summit area. Melanoplus sanguinipes up to 30 (averaged 8) per sq yd. (Kail). KANSAS - Washington and Riley Counties--averaged 5 per sq yd on 1 rangeland site each. (Porterfield).

JAPANESE BEETLE (<u>Popillia japonica</u>) - MARYLAND - Harford County-larvae. 4-10 per sq ft moderate in 2-3 acres of fairway turf in golf course; controls applied. (Hellman, Pinto).

ORIENTAL FRUIT FLY (Dacus dorsalis) - CALIFORNIA - Orange County-fifth fly trapped in Jackson trap at Cypress for total of 8 for season in State. (Hawkins).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Kern, Tulare, and Kings Counties--1,100 native adults trapped to date. Areas of heavy catches: Buena Vista Lake Bed and Pentland area; Shafter and Wasco area of Kern County; and Tipton and Pixley area of Tulare County. (Cunningham).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Union County-adult emergence beginning near Clayton. First pupae July 19.

Pupation about 50% completed. (Huddleston). Lincoln County-larval migrations and some "windrowing" in northeastern area. (Riddle).

SCREWWORM (Cochliomyia hominivorax) - Total of 8 cases reported from continental United States August 14-20, all in Arizona. (Meadows). Total of 412 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,482 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 125,796,000 as follows: Texas 86,379,600, New Mexico 9,616,500, Arizona 29,799,900. Total of 157,194,000 sterile flies released within Barrier of Mexico. (Williams, Smith).

## WEEDS

HYDRILLA (Hydrilla verticillata) - CALIFORNIA - Yuba County-little regrowth and tubers difficult to find at Lake Ellis, no finds upstream nor downstream. San Diego County--none at Lake Murray. Imperial County--found in All American Canal north of Calexico and westward downstream; none in any connecting system east of Calexico. Santa Barbara County--in motel pond at Santa Barbara. Riverside County--in pond at Coachella. Removal of these weeds underway. (Keffer).

## DETECTION

NEW STATE RECORDS

## INSECTS

A LATRIDIID BEETLE (Melanophthalma distinguenda) - NORTH DAKOTA - Rolette County--one specimen collected from stored oats at Mylo by L. Ramsfield, August 8, 1977. Determined by E. Balsbaugh. (Ramsfield, Balsbaugh).

NEW COUNTY AND ISLAND RECORDS

## DISEASES

MAIZE DWARF MOSAIC VIRUS (MDMV) - SOUTH DAKOTA - Yankton and Minnehaha. (p. 740).

## INSECTS

FACE FLY (Musca autumnalis) - ARKANSAS - Stone. (p. 748).

A MANTID (Hierodula patellifera) - HAWAII - Oahu. (p. 745).

A NOCTUID MOTH (Anua indiscriminata) - HAWAII - Lanai. (p. 745).

WESTERN CORN ROOTWORM (<u>Diabrotica</u> <u>virgifera</u>) - NEW MEXICO - Socorro and Curry. (p. 741).

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# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life	Host	Probable Origin	Port of Entry	Desti- nation
Puccinia tillandsiae Cumm. & Pollack a rust Det. F.G. Pollack	uredial	on leaves of Tillandsia from cargo	Mexico	San Diego	CA
Sphenospora kevorkianii Linder a rust Det. F.G. Pollack	uredial	on leaves of orchid plants from cargo	Ecuador	Kennedy Airport	NY
Uredo sp. a rust Det. F.G. Pollack	uredial	on leaves of Odontoglossum from baggage	Colombia	Kennedy Airport	NY
Anomala nitidula Blanchard a scarab Det. R.D. Gordon	adult	with Chrysanthemum From cargo	Guatemala	Houston	TX
Buprestis sp. a buprestid beetle Det. J.M. Kingsolver	larval	in wood dunnage	Italy	Baltimore	MA
Copitarsia sp. a noctuid moth Det. W.D. McLellan	larval	on fresh peas from cargo	Guatemala	New Orleans	LA
Orthotomicus erosus (Wollaston) a scolytid beetle Det. J.M. Kingsolver	adult	in crates of marble	Italy	Cleveland	НО
Stephanopachys sp. a bostrichid beetle Det. D.M. Anderson	larval	in crates of cargo	Spain	Houston	NA





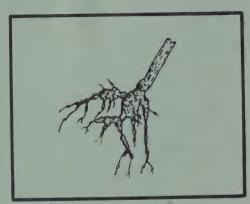
## UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service Hyattsville, Maryland 20782

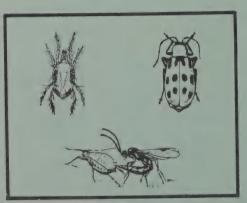
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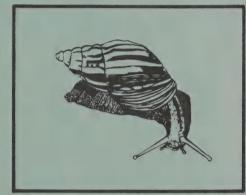
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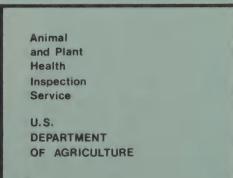
September 23, 1977

## Cooperative PLANT PEST REPORT











This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

We cannot make address changes unless we have your mailing code

## **COOPERATIVE PLANT PEST REPORT**

## HIGHLIGHTS

## Current Conditions

COMMON MAIZE RUST severity 40% or heavier on soft dough corn in northwestern areas of the Lower Peninsula of Michigan and on blister stage sweet corn in central Minnesota. (p. 758).

COMMON SMUT prevalence 40% and higher in corn in areas of north-central South Dakota, southeastern North Dakota, and northwestern Michigan. (p. 758).

Treatments still applied for GREEN CLOVERWORM and others on late soybeans in Mississippi. Treatment ineffective for BEET ARMYWORM in late fields in southeastern Arkansas. (p. 764).

TOBACCO BUDWORM and rains caused almost 50% losses to cotton in southern California. (p. 766).

SCLEROTIORUM BLIGHT most severe in many years on snap beans in central and eastern Wisconsin. (p. 767).

Reports of 100+ adults per light trap per night for TOBACCO BUDWORM in Mississippi, CORN EARWORM in Arkansas, Kansas, and Mississippi, and for ARMYWORM, FALL ARMYWORM, and YELLOWSTRIPED ARMYWORM in Mississippi. (p. 770).

## Detection

SHRUB NIGHTSHADE in Hawaii is new for the United States. (p. 765).

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## SPECIAL PESTS OF REGIONAL SIGNIFICANCE

## INSECTS

CORN EARWORM (Heliothis zea) - TEXAS - Carson, Gray, Armstrong, and Ochiltree Counties--larvae 4-5 per sorghum head in some fields September 6. (Patrick). Reeves and Ward Counties--larvae 80-160 per 100 sweeps of alfalfa September 9. (Neeb).

OKLAHOMA - Corn earworm larval counts by county week ending September 9: Texas--averaged 2 large larvae per head after treatment of 1 field of grain sorghum; Kiowa, Jackson, Greer, and Tillman--corn earworm and FALL ARMYWORM (Spodoptera frugiperda) 1-3 per 10 grain sorghum heads, complex of larvae including above species, CABBAGE LOOPER (Trichoplusia ni), and a few YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli), and ALFALFA CATERPILLAR (Colias eurytheme) 25-63 per 10 sweeps of alfalfa; Kay--corn earworm 1-2 per sq ft of alfalfa, large larvae 2-3 per row ft in several treated soybean fields; Marshall--corn earworm up to 13 (averaged 7) per row ft in peanuts; and Craig, Delaware, and Ottawa--averaged less than 1 per row ft and damaged pods 2% or less in soybean fields.

Oklahoma - Current corn earworm counts by county: Haskell, Sequoyah, Muskogee, Wagoner, and Le Flore--still on soybeans, averaged less than 1 per row ft in most fields, averaged 6 per row ft in 1 Muskogee County field; Noble--4-6 per sq ft in some alfalfa fields; Payne--eggs 3-10 and larvae 204 per mung bean plant at Perkins; Jackson and Tillman--generally light (about 1 per 10 grain sorghum heads); and Major--corn earworm and T. ni heavily infested 10 acres of commercial radishes at Ames. (Arnold).

KANSAS - South-central and southwestern areas--significant corn earworm infestations continued in sorghum heads. Larval averages per head (and growth stage) by county: Finney--0.2-1.2 in 5 fields, Comanche--1-2.2 in 2 fields (soft dough), Kiowa--0.1-0.7 in 2 fields (soft to hard dough), and Kiowa--0.6 in 1 field (hard dough). (Shuman, Salsbury).

TENNESSEE - Acres damaged (and treated) by county for corn earworm: Anderson--50 (10) of corn, Bledsoe--2,000 (1,000) of corn, Chester-2,500 (0) of corn, De Kalb-1,000 (0) of corn, Dyer 25,000 (15,000) of soybeans, Gibson--50,000 (20,000) of soybeans, Grundy--900 (not given) of corn, Hamilton--200 (75) of corn, Hardeman--10,000 (5,000) of soybeans, Hardin--5,000 (500) of corn and 50 (30) of pimento peppers, Hawkins--damage not given (all) of late sweet corn, Lincoln--15,000 (5,000) of soybeans, Marion--5,000 (0) of corn, Marshall--300 (100) of late corn and 700 (100) of soybeans, Montgomery--few acres (0) of soybeans, Moore--2,000 (300) of corn, McMinn--500 (not given) of corn, Sullivan--300 (100) of corn, Tipton--6,000 (4,000) of soybeans, Union--about 50 (not given) of silage corn, and Van Buren--102 (0) of corn (Ivens et al.); Washington--90 (not given) of tomatoes and Hawkins--5 (not given) of tomatoes (Pipkin, Carney). Acres damaged (and treated) in soybeans by county for corn earworm and S. frugiperda; Chester--20,000 (12,000) and Hardin-20,000(15,000). (Austin et al.).

FLORIDA - Jackson County--corn earworm and Spodoptera frugiperda larvae active in few peanut fields but no field required treatment September 5. Sudden wet weather and buildup of beneficial insects since June and July reduced one of worst larval problems ever seen in area. (Linker).

GREENBUG (Schizaphis graminum) - OKLAHOMA - Caddo County--up to 100 per sq ft in volunteer wheat week ending September 9. Heavy parasitism by Lysiphlebus testaceipes (an aphidiid wasp) in several fields. (Arnold).

## CORN. SORGHUM. SUGARCANE

## DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - ILLINOIS - Prevalence/ severity on commercial field corn (physiologic maturity unless stated otherwise) by county September 8-9: Morgan--99%/10%. Christian--99%/2% (all kernels dented), Marion--99%/11%, Effingham--99%/2%, St. Clair--99%/10%, Washington--99%/12%, and Madison--60% 1%. (Jordan). INDIANA - Prevalence severity on live corn leaves (physiologic maturity unless stated otherwise) by county: Elkhart--65%/2%, Kosciusko--40% 0% (all kernels dented), Wabash--14% 0% (all kernels dented), Grant--75%/2%, Howard--78%/5% (all kernels dented), and Clinton--10%/1%; averaged 45%/2% for 8 sites. (Schall). MICHIGAN - Prevalence severity in corn (all kernels dented unless stated otherwise) by county: Wexford--90%/ 40% (kernels dented), Missaukee--60%/25% (kernels blistered). Ogemaw--10% 40%, Iosco--70%/30%, Montmorency--20%/10% (maturity), Antrim--85% 60%, Leelanau--90%/70% (soft dough), Emmet--80%/60% (soft dough) in cultivar Garno 85 for forage, and Presque Isle--5%/20% in cultivar Payco SD104 N for forage. (Singh). MINNESOTA -Prevalence/severity in dent corn fields (most at or near maturity) by county: Sibley--100%/25%, Renville--100%/10%, Lincoln--100%/ 15%, Pipestone--100%/10%, and Murray--100%/20%. Sweet corn by county: Sibley--100%/30-40% (kernels blistered) and Le Sueur--100%/25-30% (soft dough). (Stromberg).

COMMON SMUT (Ustilago maydis) - ILLINOIS - Prevalence on commercial field corn (physiologic maturity unless stated otherwise) by county September 8-9: Christian--6%, Montgomery--5%, Bond--8%, Jefferson--4% (all kernels dented), Marion--3%, Effingham--4%, St. Clair--3%, Washington--2%, and Madison--4%. (Jordan). SOUTH DAKOTA - Prevalence in corn ears (all kernels dented) by county September 13-14: Brown--20-50%, and Hanson, Sanborn, Beadle, and Spink--3-5%. (Jons). NORTH DAKOTA - McIntosh and Dickey Counties--prevalence 20-50% of ears in commercial dent corn (all kernels dented) in drought-stressed areas September 13-14. (Jons). MINNESOTA - Sibley, Renville, Yellow Medicine, Lincoln, Pipestone, Murray, and Brown Counties--prevalence trace to 10% in all dent corn fields (most at or near maturity) surveyed. (Stromberg). INDIANA - Prevalence on corn (physiologic maturity unless stated otherwise) by county: Elkhart--1%, Wabash--3% (all kernels dented), Grant-3%, and Clinton-2%; averaged 2% for 8 sites. (Schall). MICHIGAN - Prevalence in corn plants (all kernels dented unless stated otherwise) by county: Wexford--5% (kernels dented), Missaukee--40% (kernels blistered), Ogemaw--30%, Iosco--5%, Montmorency--trace (maturity), Antrim--10%, Leelanau--trace (soft dough), Emmet--1% (soft dough), and Presque Isle--trace. (Singh).

STEWART'S WILT (Erwinia stewartii) - ILLINOIS - Prevalence severity on commercial field corn (physiologic maturity unless stated otherwise) by county September 8-9: Christian--14%/15%, Bond--16%/10%, Jefferson--80%/22% (all kernels dented), Marion--26%/18%, Effingham--46%/25%, St. Clair--65%/20%, and Madison--28%/15%. (Jordan). INDIANA - Prevalence on corn (and growth stage) by county: Wabash--1% (all kernels dented), Howard--3% (all kernels dented), and Clinton--5% (physiologic maturity); averaged 1% for 8 sites. (Schall).

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - ILLINOIS - Washington County--prevalence 45%/severity 15% in commercial field corn field (physiologic maturity) September 8-9 (Jordan). INDIANA - Prevalence/severity on live corn leaves (and growth stage) by county: Grant--15%/1% (physiologic maturity) and Howard-9%/1% (all kernels dented); averaged 3%/1% for 8 sites. (Schall).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity on commercial field corn (physiologic maturity) by county September 8-9: Macon--14% 5%, Christian--9%/5%, Montgomery--10% 5%, Bond--8%/4%, St. Clair--12%/8%, Washington--16%/10%, and Madison--14%/9%. (Jordan).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - ILLINOIS - St. Clair County--prevalence 70%/severity 18% in commercial field of field corn (physiologic maturity) September 8-9. (Jordan).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - ILLINOIS - Prevalence/severity of leaf spot and prevalence of stalk rot in commercial field corn (physiologic maturity) by county September 8-9: Macon--70%/35%, 6%; Montgomery--60%/15%, 14%; Bond--30%/12%, 6%; Marion--84%/30%, 13%, St. Clair--35%/18%, 11%; Washington--44% 25%, 5%; Madison--30%/20%, stalk rot not reported; Christian--leaf spot not reported, 5%; and Effingham--leaf spot not reported, 7%. (Jordan). INDIANA - Prevalence/severity on live corn leaves (physiologic maturity unless stated otherwise) by county: Elkhart--9%/3%, Kosciusko--8%/8% (all kernels dented), Wabash--53%/10% (all kernels dented), Grant--12% 1%, Howard--12% 1% (all kernels), and Clinton--99% 20%; averaged 31%/7% for 8 sites. (Schall).

ROTS - MISSOURI - Prevalence of Gibberella, Penicillium, and Fusarium ear rots in corn (all kernels dented to physiologic maturity) by county week ending September 8: St. Charles-20%, and Jefferson and Pike--up to 25%. Greater-than-normal incidence of ear rots due to injury by drought, insects, and heavier than normal rains in late August and early September. Prevalence of Gibberella, Diplodia, and Fusarium stalk rots in corn plants by county September 8: Warren--trace, Ray--10-15%, and Clay--20-25%. (Foudin).

ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis) on stalks, of FUJIKUROI ROT (Gibberella fujikuroi) on ears, and of Penicillium rot on ears of commercial field corn (physiologic maturity unless stated otherwise) by county September 8-9: Macon--8%, 4%, 2%; Christian--9%, 6%, 1%; Montgomery--8%, 5%, 1%; Bond--11%, 6%, 3%; Jefferson--roseum rot not reported, 12%, 6% (all kernels dented); Marion--4%, 9%, 3%; Effingham--23%, 3%, 1%; St. Clair--5%, 3%, 2%; Washington--4%, fujikuroi rot not

reported, 1%; and Madison--18%, 2%, 2%. MAYDIS CORNSTALK ROT (Diplodia maydis) prevalence on commercial field corn (physiologic maturity unless stated otherwise) by county September 8-9: Christian--3%, Washington--4%, and Montgomery--5%. (Jordan).

WISCONSIN - Statewide--prevalence of Fusarium and Gibberella stalk and ear rots light in corn but increasing; severe in individual fields. Drought-stressed fields generally most affected and will remain very susceptible as long as unharvested; humid conditions past few weeks favored rapid development of these diseases. (Lovett et al.). MINNESOTA - Prevalence of Fusarium stalk rots in dent corn fields (at or near maturity) by county: Yellow Medicine--30% due to Fusarium sp. directly, but nearly 100% lodging due to wind damage and heavy corn borer damage, Lincoln--5%, Murray--6%, and Brown--8%. Yellow Medicine County--prevalence of Fusarium ear rots trace in 1 dent corn field. (Stromberg).

SOUTH DAKOTA - Prevalence/severity of Fusarium ear rots in commercial dent corn (kernels dented) by county September 13-15: Roberts, Grant, Codington, Brookings, Deuel, Brown, Spink, Beadle, Davison, and Hutchinson--50%/1%; Minnehaha, Lincoln, and Bon Homme--75%/1%; and Yankton, Clay, and Union--100%/1%. Lincoln, Union, Clay, and Yankton Counties--Fusarium lodging trace in few commercial dent corn (maturity) fields, most lodging (25-50%) appeared induced by 3 or more stalk borers per plant. (Jons). NORTH DAKOTA - Richland, Dickey, Sargent, Ransom, and Cass Counties--prevalence/severity of Fusarium ear rots 25%/1% in commercial dent corn (kernels dented) September 13-15. (Jons).

## INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Infested sorghum heads, more common than usual, by county, 2 fields each: Comanche-0-10% of stalks, Pratt--20-30%, and Kiowa--trace to 60%; some head breakage and heads with small kernels noted. (Salsbury). MINNESOTA - Very heavy in corn fields (physiologic maturity) week ending September 9, averaged up to 2-3 per plant in some fields; some feeding in shanks but too early for counts of fallen ears. Averages per 100 plants (and infestation levels) by county: Wright--180 (64%), Sherburne--160 (64%), Carver--124 (94%), Morrison--32 (16%), Benton--24 (12%), and Wadena--8 (8%). (Sreenivasam). WISCONSIN - Third adult flight apparently peaked and is declining. Few susceptible crops that could be injured or contaminated. Gravid females in blacklight traps but doubtful if larvae of third generation will develop enough to overwinter. (Lovett et al.).

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Statewide-populations decreased due to cool, wet weather and host plants maturing. Late grain sorghum still damaged in southern area. (Anderson). TENNESSEE - Corn acres damaged (and treated) by county: Bledsoe--2,000 (1,000), Blount--350 (350), Carter--30 (14), Greene--1,000 (300), Grundy--20 (not reported), Hamilton--900 (200), Loudon--53 (0), Marion--4,000 (10), Marshall--200 (300) of late corn, Moore--800 (0), McMinn--3,000 (500), Polk--500 (30), Rhea--200 (0), Sullivan--100 (50), Union--40 (not reported) of silage and late sweet corn, and Van Buren--60 (0). (Deere et al.).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - UTAH - Davis and Box Elder Counties--damage heavy to corn, loss averaged about 10% in Box Elder County. (Lindsay, Knowlton).

## SMALL GRAINS

## INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Kingfisher County--ranged 5-8 per row ft in young wheat in some areas. Jackson, Tillman, Greer, Harmon, and Kiowa Counties--infestations heavy in volunteer wheat, generally light in newly emerged planted wheat. (Arnold). TENNESSEE - Acres damaged (and treated) on small grains by county: Anderson--40 (15) and Greene--15 (0). (Hart et al.). KENTUCKY - Statewide--larvae continued to damage small grains planted as cover crop in many areas. Many growers decided to replant cover crop later rather than treat. (Sloderbeck, Greenwell).

## TURF, PASTURES, RANGELAND

## INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Statewide-populations decreased due to cool, wet weather and host plants maturing. Pastures still damaged in southern area. (Anderson). ALABAMA - Greene County--new larval generation (1st to 3rd instar) 20 per sq ft in 40-acre Coastal Bermudagrass field at Boligee. (McQueen). TENNESSEE - Acres damaged (and treated) by county: Bledsoe--completely destroyed 15 acres (0) of pasture, Franklin--800 (400) of pasture, Grundy--50 (35) of pasture, Hardeman--5,000 (0) of pasture and 25 (10) of yards, Hardin--1,000 (100) of hay and 2,000 (500) of pasture, Hawkins--25 (25) of new of seeded pasture, Moore--7,000 (0) of pasture, Rhea--50 (0) of pasture and 10 (4) of lawns, and Tipton--3,000 (500) of pasture. (LeCornu et al.). WEST VIRGINIA - Kanawha County--larval damage heavy (25-50%) in several lawns and pasture grasses. Putnam County--3 to 5-acre alfalfa field completely destroyed, larvae 30-50 per sq ft. (Hacker).

SOUTHERN MASKED CHAFER (Cyclocephala immaculata) - NEBRASKA - York County--3rd instar larvae averaged 34 per sq ft in bluegrass lawn. Root pruning severe. (Roselle, Rivers).

## FORAGE LEGUMES

## INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Noble County-3-20 per sq ft in 1 alfalfa field week ending September 9. Southwestern counties--this species and 4 others, 25-63 per 10 sweeps. (Arnold). TENNESSEE - Acres damaged (and treated) in alfalfa by county: Franklin--350 (175), Greene--150 (75), Moore--25 (0), and Polk--30 (0). (Hunter et al.). KENTUCKY - Larvae continued to damage alfalfa. Damage to some recently seeded alfalfa resulted in permanent stand reduction or loss. Other fields with reduced yields or possibly reduced winter hardiness of concern. Fayette County--middle instar larvae averaged 17.6 per sweep or 24.4 per square foot in 3 to 4-year-old alfalfa stand. Defoliation in 10 to 12-inch alfalfa about 5-10%, expected to increase rapidly as larvae grow older. (Sloderbeck).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - Chaves County--1st through 3rd instar larvae up to 15 per 25 sweeps of alfalfa near Roswell. (Riddle). TEXAS - Reeves and Ward Counties--11-22 per 100 sweeps of alfalfa September 9. (Neeb).

## SOYBEANS

## DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - MISSOURI - Monroe, Pike, and Randolph Counties--prevalence 90% severity trace in soybeans (beans beginning development to full size) week ending September 8. (Foudin). ILLINOIS - Prevalence/severity on commercial soybeans (beans full size unless stated otherwise) by county September 8-9: Macon--99%/12% (physiologic maturity), Christian--99%/15% (physiologic maturity), Montgomery--99%/30% (physiologic maturity). Bond--99%/15%, Jefferson--99% 14%, Marion--99%/7%, Effingham--99% 17% (physiologic maturity), St. Clair-99%/20%, Washington-99% 12%, and Madison--50%/3% (physiologic maturity). (Jordan). INDIANA - Prevalence severity on soybeans (beans full size unless stated otherwise) by county: Elkhart--95% 8%, Kosciusko--90%/5%, Wabash--60% 4%, Grant--90%/1%, Howard--15%/10% (physiologic maturity). and Clinton--99% 10% (physiolgic maturity); averaged 74% 6% for 8 sites. (Schall). MICHIGAN - Prevalence/severity on soybeans (and growth stage) by county: Montmorency--20%/5% (beans full size) and Washtenaw--10%/5% (physiologic maturity). (Singh).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - ILLINOIS - Prevalence/severity on commercial soybeans (beans full size unless stated otherwise) by county September 8-9: Macon--55%/8% (physiologic maturity), Christian--70%/12% (physiologic maturity), Bond--99%/10%, Jefferson--99%/5%, Marion--99%/14%, Effingham--80%/15% (physiologic maturity), St. Clair--99%/15%, Washington--99%/8%, and Madison--75%/12% (physiologic maturity). (Jordan). INDIANA - Prevalence/severity on soybeans (beans full size unless stated otherwise) by county: Elkhart--65% 2%, Kosciusko--5%/0%, Wabash--31%/0%, Grant--90%/1%, Howard--50%/15% (physiologic maturity), and Clinton--99%/10% (physiologic maturity); averaged 59%/4% for 8 sites. (Schall). MICHIGAN - Prevalence/severity in soybeans (beans full size) by county: Montmorency--20%/5% and Washtenaw--30%/20%. (Singh).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - MISSOURI - Prevalence in soybeans (beans beginning development to full size) by county week ending September 8: Monroe, Randolph, and St. Charles--trace, and Jefferson and Warren--3-5%. (Foudin). MINNESOTA - Prevalence in soybeans (maturing) by county: Sibley--5%, Renville--trace, Yellow Medicine--5%, Lincoln--20%, Pipestone--5%, Murray--20%, and Brown--60%. Pycnidia usually confined to basal 10 cm or less of stem on all plants observed. Prevalence heavier with more advanced maturity of plant. (Stromberg). ILLINOIS - Prevalence on stems and on pods of commercial soybeans (physiologic maturity) by county September 8-9: Macon--12%, 3%; Christian 15%, 7%; Montgomery--18%, 7%; Jefferson--7%, 6% (beans full size); Marion--14%, 18% (beans full size); Effingham--42%, 42%; St. Clair--20%, 12% (beans full size); Washington--12%, 7% (beans full size); and Madison--4%, 4%. (Jordan). INDIANA - Prevalence on stems and on pods of soybeans (and growth stage)

of soybean pod and stem blight by county: Elkhart--3%, 0% (beans full size); Wabash--8%, 1% (beans full size), Howard--20%, 1% (physiologic maturity); and Clinton--40%, 1% (physiologic maturity); averaged 10%, 0% for 8 sites. (Schall).

CHARCOAL ROT (Macrophomina phaseolina) - MISSOURI - Prevalence in soybeans (beans beginning development to full size) by county week ending September 8: Randolph--trace, Warren--1-3%, and Henry--10%. (Foudin). ILLINOIS - Prevalence/severity on commercial soybeans (beans full size unless stated otherwise) by county September 8-9: Macon--12% (physiologic maturity), Christian--16% (physiologic maturity), Montgomery--38% (physiologic maturity), Bond--2%, Jefferson--9%, Marion--12%, Effingham--35% (physiologic maturity), St. Clair--8%, Washington--6%, and Madison--7% (physiologic maturity). (Jordan). INDIANA - Wabash County--prevalence 1%, averaged 0% for 8 sites, in soybeans (beans full size). (Schall).

BROWN STEM ROT (Phialophora gregata) - MINNESOTA - Prevalence in soybeans (physiologic maturity) by county: Sibley--70%, Renville--10%, Yellow Medicine--80%, Lincoln--80%, Pipestone--90%, Murray--100%, and Brown--80%. Heavier prevalence and severity (e.g. stem discoloration) associated with advanced maturity of field. Most browning of vascular tissue confined to basal 8 cm or less of stem. (Stromberg). ILLINOIS - Prevalence in commercial soybeans (and growth stage) by county September 8-9: Christian--28% (physiologic maturity) and Jefferson--11% (beans full size). (Jordan).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - MISSOURI - St. Charles County--trace in soybeans (beans beginning development to full size) week ending September 8. (Foudin). ILLINOIS - Prevalence in commercial soybeans (physiologic maturity unless stated otherwise) by county September 8-3: Christian--4%, Montgomery--9%, Marion--7% (beans full size), Effingham--3%, St. Clair--11% (beans full size), Washington--12% (beans full size), and Marion--3%. (Jordan). INDIANA - Wabash County--prevalence 1%, averaged 0% for 8 sites in soybeans (beans full size). (Schall).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - MISSOURI - St. Charles County--trace levels in soybeans (beans beginning development to full size) week ending September 8. (Foudin). ILLINOIS - Prevalence in commercial soybeans (physiologic maturity) by county September 8-9: Macon--3%, Christian--6%, Montgomery--10%, and Effingham--5%. (Jordan).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - MINNESOTA - Renville County--prevalence 100%/severity 25% in 1 soybean field (physiologic maturity); field beginning defoliation but had many green leaves still on plants. (Stromberg). INDIANA - Prevalence/severity on soybeans (beans full size) by county: Kosciusko--1%/0% and Grant--20%/1%; averaged 3%/0% for 8 sites. (Schall).

PHYTOPHTHORA ROOT AND STEM ROT (Phytophthora megasperma var. sojae) - INDIANA - Elkhart County--prevalence 2%, averaged 0% for 8 sites, in soybeans (beans full size). (Schall).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - MISSOURI - Prevalence severity in soybean plants (beans beginning development to full size) by county week ending September 8: Carroll--100%/5%, Ray--100%/trace, Clay--75%/8%, Johrson--100%/5%, and Jefferson--100%/trace. (Foudin). MINNESOTA - Renville and Sibley Counties--prevalence 100%/severity 15% in 1 soybean field each (physiologic maturity), many green leaves still on plants. (Stromberg). INDIANA - Prevalence severity on soybeans (beans full size) by county: Elkhart--7%/1%, Kosciusko--5%/1%, and Grant--10% 0%; averaged 4%/0% for 8 sites. (Schall).

TOBACCO RINGSPOT VIRUS - MISSOURI - Pike County--prevalence 40% in soybeans (beans beginning development to full size) which exhibited severe bud blight symptoms week ending September 8. (Foudin). MICHIGAN - Washtenaw County--bud blight prevalence 95% in soybeans (physiologic maturity). (Singh).

## INSECTS

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Le Flore, Sequoyah, Haskell, Muskogee, and Wagoner Counties--small larvae ranged 1-20 (average 6) per row ft in soybeans week ending September 9. Currently, this species, VELVETBEAN CATERPILLAR (Anticarsia gemmatalis), and CABBAGE LOOPER (Trichoplusia ni) up to 10 per row ft, defoliation 20+% in some fields. (Arnold).

MISSISSIPPI - Statewide--larvae of the above species and SOYBEAN LOOPER (Pseudoplusia includens) still heavy on untreated late soybeans. Treatments still applied in many areas. Stone County--A. gemmatalis 10.2 per row ft on 300 acres. (Anderson). FLORIDA - Jackson County--green cloverworm increased slowly on soybeans, almost all fields still below treatment levels. (Linker).

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Soybean acres damaged (and treated) by county: Chester -- 20,000 (12,000), Gibson--5,000 (3,000), Hardeman--5,000 (3,000), Hardin--15,000 (10,000), Marion--2,000 (400), Marshall--800 (800), and Meigs--20 (20). (Carr et al.). DELAWARE - Sussex County--adults increased in blacklight trap collections, averaged 100+ per night in some traps. (Burbutis, Kelsey).

BEET ARMYWORM (Spodoptera exigua) - TEXAS - Reeves and Ward Counties--larvae of this species and YELLOWSTRIPED ARMYWORM (S. ornithogalli), FALL ARMYWORM (S. frugiperda), and ARMYWORM (Pseudaletia unipuncta) 800-1,000 per 100 sweeps of alfalfa September 9. (Neeb). ARKANSAS - Southeastern area--beet armyworm still larvae up to 25 per row ft and pod damage up to 50% in late soybean fields. No available chemicals effective. (Wall).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Alachua, Levy, Columbia, and Suwannee Counties--increased, growers treated 70% of 3,400 acres of soybeans. (Baker). Jackson County--increased slowly, only 1 field at treatment level. (Linker).

MEXICAN BEAN BEETLE (Epilachna varivestis) - KENTUCKY - Trimble County--completely defoliated several soybean fields. Heaviest damage in fields where beans almost full size on lower pods. Defoliation on late-planted beans (beans beginning development) due to heavy adult populations. No eggs or larvae on late-planted beans. (Yeargan, Isenhour).

GREEN STINK BUG (Acrosternum hilare) - OKLAHOMA - Delaware, Craig, and Ottawa Counties--ranged 1-2 per ft in soybeans week ending September 9. Le Flore, Sequoyah, Haskell, Muskogee, and Wagoner Counties--increased, averaged less than 1 per row ft. Currently almost 1 per row ft in about 10% of soybean fields; averaged 1+ per row ft in 1 field each in Muskogee and Haskell Counties. (Arnold).

## **PEANUTS**

## INSECTS

BEET ARMYWORM (Spodoptera exigua) - OKLAHOMA - Marshall County--1-2 per row ft in peanuts week ending September 9. (Arnold).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Alachua and Levy Counties--increased to treatment levels on 20% of 2,500 acres of peanuts. (Baker).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Marshall County--terminal infestations averaged 63% in peanuts week ending September 9. (Arnold).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Marshall County--infested up to 100% in dryland Florunner peanuts and up to 70% in dryland Spanish peanuts week ending September 9. (Arnold).

## HAWAII PEST REPORT

New United States Record - SHRUB NIGHTSHADE (Solanum robustum H. Wendl.) found at Hana, Maui, by R. Hobdy, May 1977. Determined by W.G. D'Arcy. This very thorny plant appears to have noxious potential in pasturelands. Growth and reproductive characteristics under evaluation. Preliminary survey showed infestation on at least 0.25 acre. (Shinbara, Tamura). Native to Argentina, Brazil, and Paraguay. (Terrell).

General Vegetables - LEAFMINER FLIES (<u>Liriomyza</u> spp.) infestations and damage heavy (50-75% of leaves heavily mined) on 0.5 acre green onion at Waianae Valley, Oahu. (Matayoshi, L. Nakahara).

Fruits and Nuts - Several adults of a NYMPHALID BUTTERFLY (Agraulis vanillae) frequenting Passiflora foetida vines at Waianae Valley in recent weeks. Adults sighted as far north as Kaaawa, Oahu. (L. Nakahara).

## INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Adults per acre of cotton, % of infested fields with punctured squares, and mean of punctured squares by county September 2: Motley in control zone-2,750, 100%, 46.2; Dickens in control zone-500, 90%, 17.1; Kent in control zone-1,725, 100%, 46.0; Kent outside control zone-4,150, 100%, 81.8; and Stonewall outside control zone-3,350, 100%, 74.7. (Leser, Morrison). Counts by county September 5-9: Tom Green and Runnels--punctured squares 10-100%; Runnels--3-56 adults trapped; Tom Green-256 adults in 1 trap, 50% diapausing adults; Fisher and Jones--punctured squares 50-100% in most fields; Rolling Plains--damaged squares 40-95% in some fields. (Bohmfalk et al.)

OKLAHOMA - Caddo County--punctured 75-100% of few remaining squares on cotton week ending September 9. (Arnold). ARKANSAS - Southeastern area--increased on cotton; heavy population expected to enter diapause. (Wall).

BOLLWORMS (Heliothis spp.) - CALIFORNIA - Imperial County--TOBACCO BUDWORM (H. virescens) damage and tropical rain caused about 40-50% losses to cotton in Imperial Valley. (Maren). TEXAS - BOLLWORM (H. zea) and H. virescens counts on cotton by county September 2-9: Tom Green--larvae 0-8% on irrigated plants. eggs 0-11 per 100 terminals, eggs 0-34 per 100 irrigated plants at Veribest; Tom Green and Runnels--larvae 0-90 per 100 plants: Fisher and Jones--eggs 0-5, larvae 0-8 and 0-20, damaged squares 0-14% and 0-10% per 100 terminals; Crosby--eggs 3-100, larvae 3-55, and damaged squares 1-35% per 100 plants; Hale--eggs 1-14 per 100 plants, damaged squares 1-28%, eggs 8-80 (mean 27) per 100 terminals, larvae 0-72 (mean 26) per 100 plants, damaged squares 6-32% in irrigated fields; Wheeler--damaged squares 15-20%, eggs 7 per 100 terminals; El Paso--eggs 20-25%, small larvae 15-20%, and damaged squares up to 20% in some fields at Clint, eggs 6-8%, larvae 4-6%, and damaged squares 0-6% in most fields; Pecos and Reeves--eggs 0-100+ and small larvae 0-26 per 100 terminals, damaged squares 0-50 per 100 plants; Trans-Pecos area--eggs 0-19 and small larvae 0-7 per 100 terminals, damaged squares 0-15 per 100 plants. (Finley et al.).

OKLAHOMA - Heliothis spp. on cotton by county week ending September 9: Washita and Caddo--averaged 10 larvae per 100 terminals in 2 fields; Jackson, Greer, Harmon, Tillman, and Kiowa-larvae 0-17 (averaged 3) and eggs 0-14 (averaged 3) per 100 terminals, and damaged squares 0-21% (averaged 7%). Southwestern area--larvae 16-34% H. virescens; currently most infestations light. (Arnold). ARKĀNSĀS - Southeastern area--H. zea and H. virescens eggs 28-127 and larvae 11-65 per 56 row ft in greener cotton fields. (Wall). MISSISSIPPI - Statewide--cotton picking underway in many areas, Heliothis spp. larvae still heavy on green cotton. Ending treatment too soon caused loss of maturing bolls in some fields. Larval infestation on green cotton by county: Hinds--45% on 50 acres, Lafayette--5% on 2,000, Montgomery--5% on 650, Leake--15% on 1,200, Itawamba--3% on 200, Holmes--14% on 500, Yalobusha--6% (up to 50%) on 5,000, Madison--20% on 2,500, Monroe--10% on 500, and Alcorn--10% on 250. (Anderson).

TENNESSEE - Cotton acres damaged (and treated) by county for  $\underline{\mathtt{H}}$ . zea: Dyer-8,500 (3,000), Franklin-500 (not reported), Gibson-4,000 (3,000), Hardeman-2,000 (1,500), and Tipton-5,000 (3,000). (Skinner). GEORGIA - Adults on "sugar line" on August 28 and August 31, respectively: 68 and 83  $\underline{\mathtt{H}}$ . virescens and 118 and 176  $\underline{\mathtt{H}}$ . zea.  $\underline{\mathtt{H}}$ . virescens adults trapped by county week ending September 3: Dooly and Tift--1, Crisp--2, and Turner--0. Adult flight begun, mostly of  $\underline{\mathtt{H}}$ . zea. (Emery, Lambert).

CABBAGE LOOPER (<u>Trichoplusia ni</u>) - OKLAHOMA - Payne County-ranged 20-50 per plant in cotton at Perkins week ending September 9; treatment effective. (Arnold).

FALL ARMYWORM (Spodoptera frugiperda) - TENNESSEE - Acres damaged (and treated) in cotton by county: Chester--2,000 (500), Gibson--3,000 (2,000), and Tipton--2,500 (1,000). (Kimery et al.).

COTTON LEAFPERFORATOR (<u>Bucculatrix thurberiella</u>) - OKLAHOMA - Jackson County--larvae up to 21 per leaf in spots in some cotton fields and defoliation severe in some areas. (Arnold).

## **COLE CROPS**

## INSECTS

CABBAGE LOOPER (<u>Trichoplusia ni</u>) - WISCONSIN - Washington County--2 adults in pheromone trap September 6-12. Many diseased larvae, but control problems caused by rains persist in unharvested cabbage. (Lovett et al.).

## BEANS AND PEAS

## DISEASES

SCLEROTIORUM BLIGHT (Sclerotina sclerotiorum) - WISCONSIN - Central and eastern areas--severe in some snap bean fields, most severe ever seen in many years. (Lovett et al.).

## **DECIDUOUS FRUITS AND NUTS**

## DISEASES

PEACH YELLOW LEAF ROLL VIRUS - CALIFORNIA - Yuba County--infected trees significantly increased at Linda. Prevalence 2-4% in 30-acre peach orchard. (Chaney).

## INSECTS

CODLING MOTH (<u>Laspeyresia pomonella</u>) - WASHINGTON - Pheromone trap catches by county: <u>Grant--averaged 0.5</u> (ranged 0-1) per trap in 35 areas near Royal Slope week ending September 2 and averaged 0.1 (ranged 0-2) per trap week ending September 9. (Hunter).

## MAN AND ANIMALS

## INSECTS

HORN FLY (<u>Haematobia irritans</u>) - NEW MEXICO - Dona Ana County-500-3,000 per head on Jornada Range, many reported biting humans. (Kinzer). OKLAHOMA - Payne County--ranged 2,000-3,000 per head on untreated cattle week ending September 9. (Arnold). FLORIDA - Alachua County--averaged 476 adults per head in small beef herd at Gainesville September 7. (Hogsett). Population expected to slowly decline for rest of year. (Simon).

## FEDERAL AND STATE PROGRAMS

## DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - San Mateo County--several new infested sites confirmed; 1 site at Atherton, few miles from any previously known infestation, involved several trees September 9. (Arciero).

## INSECTS

GRASSHOPPERS - OKLAHOMA - Panhandle, northwestern, northeastern, west-central, east-central, southwestern, south-central, and southeastern counties -- 1977 adult grasshopper survey showed about 974,000 acres of rangeland economically infested (8 or more per sq yd) week ending September 9. Eastern counties--heavier counts of 25-50 per sq yd in improved pastures. Melanoplus bivittatus, Mermiria maculipennis, Melanoplus packardii, Phlibostroma quadrimaculatum, Melanoplus occidentalis, Syrbula admirabilis, Ageneotettix deorum, Drepanopterna femoratum, Aulocara elliotti, and Boopedon nubilum dominant on grassland. Dry June and July aided grasshopper buildups in State this year. Economic infestations increased in eastern counties in Bermudagrass, fescue, improved pastures, and mixed pasture grasses. Caddo and Washita Counties -- damaged newly planted wheat (mainly by Melanoplus differentialis and M. bivittatus). (Arnold). KANSAS - Greeley, Wichita, Hamilton, Grant, Kearny, Finney, and Seward Counties--Melanoplus sanguinipes damage to borders ranged from trace to 200 yds into fields of seedling wheat. Populations moving from adjacent weedy spring-harvested wheat. Presence of many nymphs indicated second generation probably developed in area this year. Low level migratory flights noted. Treating reported. (Shuman). Comanche County--averaged 2-6 per sq yd, damage light, in border of seeding alfalfa near Coldwater. (Salsbury). NORTH DAKOTA -Slope County--Melanoplus bivittatus egg pods at 2 sites: 62% in segmented stage and 28% in eyespot stage. (Brandvik, Scholl).

SCREWWORM (Cochliomyia hominivorax) - Total of 24 cases reported from continental United States August 21 to September 3 as follows: New Mexico 2 and Arizona 22. (Meadows). Total of 666 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,686 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 251,256,280 as follows: Texas 171,583,780; New Mexico 16,875,000; Arizona 62,797,500. Total of 246,940,560 sterile flies released within Barrier of Mexico. (Williams, Smith).

WEST INDIAN SUGARCANE ROOT BORER (Diaprepes abbreviatus) - FLORIDA - Broward County-few adults collected at 4 locations in same area of Davie, on stems and leaves of Citrus sp., and Schinus terebinthifolius (Brazilian pepper tree) August 29-31, 1977. (Smith et al.).

## WEEDS

RUSH SKELETONWEED (Chondrilla juncea) - CALIFORNIA - San Luis Obispo County--infested 2 acres in 70-acre oat field at San Luis Obispo. First time in State weed found in annual crop. Area treated. (Seek, Keffer).

## **DETECTION**

NEW UNITED STATES RECORD

## WEEDS

SHRUB NIGHTSHADE (Solanum robustum H. Wendl.) - HAWAII - Maui Island. (p. 765).

## **CORRECTIONS**

CPPR 2(35):699 - SOYBEAN ANTHRACNOSE (Collectotrichum dematium var. truncata) should be (Colletotrichum dematium var. truncata).

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SCONSIN Bear Creek 9/8-13			BL						11					0	0	_	_			

UV - Ultraviolet

# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Brachycerus sp. a weevil Det. D.R. Whitehead	larval	in garlic from cargo	Spain	New York	USA
Conotrachelus perseae Barber a weevil Det. D.M. Anderson	larval	in seed of avocado from baggage	Honduras	Miami	I L
Orchamoplatus mammaeferus (Q. 8 B.) a whitefly Det. M.B. Stoetzel	adult	on croton from aircraft quarters	Tahiti	Los Angeles	USA
Parlatoria blanchardii (Tarr. 8 parlatoria date scale Tozz.) Det. D.M. Odermatt	adult	on dates from baggage	Lebanon	Kennedy Airport	XL
Pissodes notatus (Fabricius)  banded pine weevil  Det. D.R. Whitehead	adult	in crates of steel	Spain	Charleston	USA
Scolytus intricatus (Ratzeburg) a scolytid beetle Det. D.M. Anderson	adult	in hold of aircraft	Germany	McGuire	N
Helicella neglecta (Draparnaud) a snail Det. R. Munkittrick	adult	on cargo container vans	Italy	Тамра	니
Limacolaria numidica Reeve a snail Det. R. Munkittrick	adult	on <u>Ananas</u> plants from cargo	Ivory	Kennedy Airport	FI LI









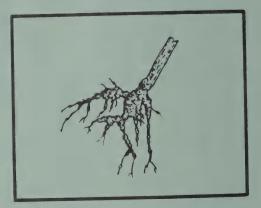
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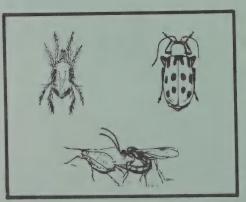
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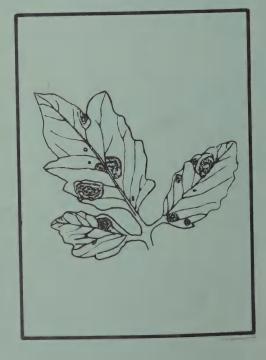


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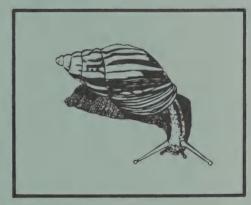






# Cooperative ASB823 LANT PEST REPORT





Animal and Plant Health Inspection Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
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U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

We cannot make address changes unless we have your mailing code

#### **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

# Current Conditions

Corn losses due to ROTS and EUROPEAN CORN BORER economic in parts of Minnesota and North Carolina. (p. 776, 777-778).

FALL ARMYWORM damage continued on corn in Ohio, small grains in Alabama, oats in South Carolina, and rye in Maryland. (p. 778). Fall armyworm on grasses in Oklahoma, Missouri, Mississippi, Alabama, and South Carolina. (p. 779).

# Detection



A new LADY BEETLE genus in the Western Hemisphere. (p. 786).

COMMON CRUPINA is new for Idaho. (p. 782).

For new county and island records see page 786.

First larval association with adults of a SAWFLY. (p. 784).

Reports in this issue are for the week ending September 23 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

CORN EARWORM (Heliothis zea) - NEW MEXICO - Roosevelt and Curry Counties--larval damage continued in tender late corn stalks, larvae 1-3 per stalk. Curry County--larvae fed on 60% of sorghum heads. Adult flights unusually heavy. (Staff). TEXAS - Counts by county September 14-16: Armstrong, Carson, Gray, Randall, and Wheeler--3-4 larvae per sorghum head; Pecos and Reeves--up to 300 per 50 sweeps of alfalfa. (Patrick, Foster). ARKANSAS - Poinsett County--larvae above treatment level in 1 soybean field. (Kimbrough). MISSOURI - South-central area--light to moderate in late-planted sorghum, 0-14 small larvae per 100 plants week ending September 17. (Munson). SOUTH CAROLINA - York and Chester Counties--severe enough on several hundred acres of soybeans to require treatment. (Douglass).

NORTH CAROLINA - Statewide--corn earworm infestations seem below 15% threshold level in most late soybean fields. Chatham, Moore, Lee, Randolph, and Anson Counties--below threshold in 12 of 15 late-maturing fields. Piedmont area--damage continued in some late fields. (Hunt). MARYLAND - Eastern Shore counties--decreased on soybeans as larvae began pupation; fungal diseases in all populations September 10-23. Most soybeans mature enough to resist more pod damage, signaling end of significant control problem statewide. Corn earworm decreased on peppers, snap beans, and lima beans. (Hellman, Pinto).

GREENBUG (Schizaphis graminum) - SOUTH DAKOTA - Meade and Perkins Counties--heavy on winter wheat. About 250,000 acres of winter wheat in State treated with systemics at planting. (Walgenbach).

# CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - IOWA - Prevalence 99%/ severity as stated in surveyed corn fields (physiologic maturity) by county week ending September 2: Mahaska--5%, Wapello--2-10%, Lucas--5%, and Adair--5-25%. (Williams). ILLINOIS - Prevalence/ severity (physiologic maturity) on field corn by county September 15-16: Vermilion--99%/15%, Clark--99%/18%, Crawford--99%/12%, Richland--99%/5%, Wayne--99%/12%, Williamson--99%/20%, Saline--99%/15%, Hamilton--99%/14%, Clay--99%/10%, and Coles--99%/16%. (Jordan). INDIANA - Prevalence/severity on live corn (growth stage) leaves by county: Hendricks--64%/1% (physiologic maturity), Lawrence--34%/2% (all kernels dented), and Montgomery--36%/trace (physiologic maturity). (Schall).

COMMON SMUT (Ustilago maydis) - IOWA - Prevalence in corn fields (physiologic maturity) by county week ending September 2: Mahaska-trace to 2%, Wapello-trace, and Adair-2%. (Williams). ILLINOIS - Prevalence on field corn (physiologic maturity) by county September 15-16: Vermilion-4%, Clark-7%, Crawford-8%, Richland-5%, Wayne-8%, Williamson-9%, Saline-9%, Hamilton-12%, Clay-7%, and Coles-8%. (Jordan). INDIANA - Prevalence on live corn (growth stage) leaves by county: Morgan-2% (physiologic maturity), Spencer-2% (all kernels dented), and Montgomery-2% (physiologic maturity); averaged trace in 12 sites. (Schall).

SOUTHERN LEAF BLIGHT (Helminthosporium maydis) - ILLINOIS - Prevalence/severity on field corn (physiologic maturity) by county September 15-16: Crawford-45%/20%, Richland-21%/15%, williamson-30%/10%, Saline-90%/25%, and Coles-14%/10%. (Jordan).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - IOWA - Polk County--prevalence 25%/severity 10% in T corn field (physiologic maturity) week ending September 2. (Williams). ILLINOIS - Prevalence/severity on field corn (physiologic maturity) by county September 15-16: Vermilion--26%/10%, Richland--23%/12%, and Clay--18%/15%. (Jordan).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity on field corn (physiologic maturity) by county September 15-16: Clark--24%/17%, Crawford-19%/12%, and Hamilton--55%/18%. (Jordan).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - ILLINOIS - Prevalence/severity of leaf spot and prevalence of stalk rot in field corn (physiologic maturity) by county September 15-16: Vermilion--99%/12%, 2%; Clark--99%/28%, 32%; Crawford--93%/35%, 17%; Richland--99%/20%, 6%; Wayne--99%/38%, 7%; Williamson--99%/18%, 9%; Saline--99%/20%, 5%; Clay--99%/24%, 14%; Coles--99%/25%, 6%; Hamilton--leaf spot not given, stalk rot 5%. (Jordan). INDIANA - Prevalence/severity on live corn (growth stage) leaves by county: Hendricks--60%/5% (physiologic maturity) Lawrence--50%/5% (all kernels dented), Spencer--99%/10% (all kernels dented), and Montgomery--40%/5% (physiologic maturity). (Schall).

ROTS - IOWA - Prevalence of Fusarium and Penicillium ear rots in surveyed corn fields (physiologic maturity) by county week ending September 2: Mahaska-40%, Wapello-20%, Lucas-25%, and Adair-30%. Infections limited to ear tips injured by insect feeding. Current prevalence on corn ear tips (harvest maturity) by county: Iowa-trace, Muscatine-trace to 5%, and Jones and Carroll-trace. Prevalence of FUJIKUROI ROT (Gibberella fujikuroi) in corn fields (physiologic maturity) by county week ending September 2: Mahaska-2% and Wapello-trace. Prevalence of Fusarium stalk rots in corn fields (physiologic maturity) by county: Iowa-40%, Muscatine-10%, Clinton-30%, Jones-20%, and Carroll-trace. (Williams).

MINNESOTA - Prevalence of Fusarium stalk rots and of Fusarium ear rots in commercial dent corn (harvest maturity) fields by county: Olmsted--2%, trace; Winona--4%, not reported; Freeborn--10%, 10%; Faribault--28%, 30%; Martin--6%, 3%; Jackson--12%, 3%; Rock--4%, not reported; Swift--43%, 12%; Kandiyohi--22%, 12%; Fillmore--not reported, 90% of infected ears associated with insect damage; and Mower--not reported, 80% of infected ears associated with insect damage. Stalk rot attributed to Fusarium spp. only when breakage of stalk not associated with EUROPEAN CORN BORER (Ostrinia nubilalis) damage. Loss in stored corn may increase due to high levels of Fusarium spp. ear rot and due to early harvest to prevent O. nubilalis losses. (Stromberg).

ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis), of FUJIKUROI ROT (Gibberella fujikuroi), and of Penicillium rot on ears of field corn (physiologic maturity) by county September 15-16: Richland--2%, 5%, 2%; Williamson--2%, 2%, 2%. Roseum rot not reported, fujikuroi and penicillium rot as stated: Vermilion--5%, 2%; Clark--2%, 2%; Crawford--8%, 6%; Wayne--6%, 3%; Saline--6%, 8%; Hamilton--3%, 6%; Clay--5%, 5%; and Coles--4%, 4%. Prevalence of roseum rot in stalks and of MAYDIS CORNSTALK ROT (Diplodia maydis) in field corn (physiologic maturity) by county September 15-16: Vermilion--1%, not reported; Clark--6%, not reported; Crawford--5%, 15%; Richland--3%, not reported; Wayne--4%, 2%; Williamson--17%, 3%; Saline--8%, not reported, Hamilton--10%, 8%; Clay--24%, not reported; and Coles--12%, 4%. (Jordan).

INDIANA - Prevalence of ear rots caused by Fusarium sp. (52%), Penicillium (31%), Diplodia (8%), Gibberella (2%), unidentified fungi (4%), and bacteria (1%) by county in corn (physiologic maturity unless stated otherwise): Boone--16%, Hendricks--16%, Lawrence 26% (all kernels dented), Dubois--18%, Spencer--76% (all kernels dented), Gibson--32%, Greene--4%, Clay--14%, Parke--9%, and Montgomery--24%; averaged 20% in 12 sites. Typically, rots followed insect damage to ear. Prevalence of stalk rots (Anthracnose major cause of stalk rots; Gibberella also contributing agent, often in combination) in corn (physiologic maturity) by county: Boone--24%, Morgan--10%, Dubois--40%, Spencer--22%, Gibson--4%, Greene--44%, Parke--6%, and Montgomery--2%; averaged 15% in 12 sites. (Schall).

STEWART'S WILT (Erwinia stewartii) - ILLINOIS - Prevalence/severity on field corn (physiologic maturity) by county September 15-16: Clark--22%/15%, Crawford--19%/12%, Richland--15%/10%, Williamson--38%/18%, Hamilton--85%/20%, and Clay--24% 17%. (Jordan). INDIANA - Prevalence/severity on live corn (growth stage) leaves by county: Hendricks--20%/5% (physiologic maturity), Lawrence--52%/5% (all kernels dented), Spencer--50%/2% (all kernels dented), and Montgomery--50%/4% (physiologic maturity). (Schall).

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - Northeastern, eastern, and southeastern districts--second generation heavy on corn and sorghum. (Miller). MISSOURI - Southern areas--fall abundance survey indicates heaviest populations in 5 years week ending September 17. (Munson). MINNESOTA - Corn shank infestation ranged 6-31% and ear drop ranged 1-7 per 100 plants. Combining operations underway in most counties at least 21 days early, aimed at reducing losses from corn borer damage. Yields very good, ranged 80-120 bushels per acre. (Sreenivasam).

OHIO - Statewide--European corn borer larvae of all sizes in ears and stalks of all corn fields surveyed. Clinton County--feeding damage on 9 of 20 plants. (Drees). Adult population rapidly decreasing. Wayne County--second generation flight peak lightest since 1974, indicate light overwintering population. (Rings). NORTH CAROLINA - Southern Coastal Plains and southern Piedmont-severe ear drop in scattered corn fields. Sampson, Johnston, and Richmond Counties--10% ear drop and 15-20% stalk lodging. With

European corn borer and stalk rot damage, early harvest needed to save grain. Gleaning should be considered in some fields. Harvesting losses 35+% in some fields. (Hunt).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - NEW MEXICO - Curry County--infested 60% of cornstalks. Roosevelt County--larvae 3-5 per stalk in some fields south of Portales. (Iselin). OKLAHOMA - Texas County--up to 50% lodging in some fields of late-planted corn. (Arnold).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Payne County-averaged 2 per plant in field of 15-inch late sorghum. (Arnold). KENTUCKY - Adair County--larvae continuing to damage late-planted silage corn. (Sloderbeck). OHIO - Warren County--up to 9 larvae of various instars (averaged 3) per ear. Clinton and Fayette Counties--fall armyworm heavy in corn fields. Up to 90% of ear tips damaged, larvae per ear lighter. (Drees).

PINK SCAVENGER CATERPILLAR (Sathrobrota rileyi) - ALABAMA - Wilcox County--larvae unusually heavy in damaged ear corn and maturing grain sorghum heads in several fields. Infestation and damage by this and other storage pests expected to be heavy and widespread in corn and grain sorghum this season, partly due to earlier damage to corn ear shucks by heavy FALL ARMYWORM (Spodoptera frugiperda) and CORN EARWORM (Heliothis zea) infestations. Expected to develop to heavy numbers in storage during winter of 1977 and spring of 1978. (Farquhar et al.).

CORN ROOTWORMS (Diabrotica spp.) - WYOMING - New county record. Washakie County--WESTERN CORN ROOTWORM (D. virgifera) adults in small patch of sweet corn at Worland, July 19, 1977. Collected and determined by E.W. Spackman. (Spackman). WISCONSIN - State-wide--D. virgifera and NORTHERN CORN ROOTWORM (D. longicornis) still very active in corn. Fond du Lac County--recent lodging in some corn fields, lodging apparent when soil became wet and winds tipped plants. Lodging averaged 16% in some fields. (Lovett).

#### SMALL GRAINS

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Counts in wheat by county: Cotton-2-5 per row ft, Canadian--up to 100%, and McClain--up to 60%. (Arnold). ALABAMA - Talladega County--this species and YELLOWSTRIPED ARMYWORM (S. ornithogalli) damaged small grains for winter grazing in several locations and wheat. Macon and Montgomery Counties--occasional fall armyworm adult noted (no larvae) in germinated small grains in 5 fields. (O'Daniel et al.). SOUTH CAROLINA - Saluda County--up to 10 fall armyworm larvae per sq ft in 100 acres of oats, treatment recommended. (Griffin, Perry). MARYLAND - Eastern Shore and southern counties--infested 7,000 acres of rye cover crop, up to 15 larvae per sq yd; probably 50% of acreage at economic injury levels September 10-23. (Hellman, Pinto).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Love and Carter Counties--about 20% stand reduction in some early planted small grain fields. (Arnold).

GARDEN WEBWORM (Loxostege rantalis) - OKLAHOMA - Kingfisher County--0-3 per row ft, damaged 1 wheat field formerly in alfalfa. (Arnold).

# TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Payne County-ranged 15-20 per sq ft in few lawns at Stillwater. (Arnold).

MISSOURI - Small larvae light to moderate on fall-seeded grasses in lawns and pastures; central area--larvae 0-4.5 per sq ft in 2 pastures. (Munson). MISSISSIPPI - Oktibbeha and Lowndes Counties--larvae up to 53 per sq ft on Bermudagrass lawns and pastures. In spite of heavy numbers, feeding reduced due to cool weather. (Anderson). ALABAMA - Third and late populations occurred in 40 acres of Coastal Bermudagrass at Boligee, Greene County, 200 acres of coastal Bermudagrass in Blount County, and isolated areas of Jackson County. (Dyar et al.). SOUTH CAROLINA - New generation emerged in varying numbers during first week of September in lower Pickens County and about September 10 in Newberry County. (Griffin, Eason).

A SOD WEBWORM (Crambus trisectus) - MARYLAND - Prince Georges County--4-15 per sq ft in commercial sod, controls applied September 10-23. (Hellman, Pinto).

#### FORAGE LEGUMES

# INSECTS

FALL ARMYWORM (Spodoptera fruiperda) - MISSOURI - South-central area--larvae light, 0-12 per 10 sweeps, in all alfalfa fields week ending September 17. Boone County--2nd and 3rd instar larvae currently 0-11 per sq ft. (Munson). KENTUCKY - Larvae continued to damage alfalfa. Some attempts at control failed due to rain. Fayette County--50 mid-instar larvae collected in alfalfa field September 15: 4 dead from fungal disease, 4 pupated, and 4 dead of undetermined causes. No sign of parasitism as of September 23. (Sloderbeck). OHIO - Warren County--various instar larvae averaged 3.5 per sweep on 18-inch alfalfa. (Drees).

ALFALFA CATERPILLAR (Colias eurytheme) - NEVADA - Nye County-larvae averaged 5 per sweep of alfalfa in Pahrump Valley. (Zoller). TEXAS - Pecos and Reeves Counties--15 per 50 sweeps of alfalfa September 16. (Foster).

MEXICAN BEAN BEETLE (Epilachna varivestis) - INDIANA - Statewide-beetle adults and FALL ARMYWORM (Spodoptera frugiperda) larvae continued to feed on alfalfa, treatment needed in some cases. (Edwards, Matthew).

PEA APHID (Acyrthosiphon pisum) - OHIO - Warren County--moderate, 25-50 per sweep, on 18-inch alfalfa. Populations vary greatly from field to field. (Drees).

#### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - IOWA - Prevalence/ severity in surveyed soybean fields (physiologic maturity) by county week ending September 2: Mahaska--25%/5-10%, Wapello--30%/ 5-10%, and Adair--10%/1-5%. Current prevalence/severity in surveyed soybean fields (physiologic maturity) by county: Crawford-80%/10-15%, Carroll-90%/5-10%, Adams-50%/10-20%, and Monroe--60%/35-40%. (Williams). ILLINOIS - Prevalence/severity on soybeans (physiologic maturity unless stated otherwise) by county September 15-16: Vermilion--99%/85%, Clark--99%/99%, Crawford--99%/75%, Richland--99%/99%, Wayne--99%/99% (harvest maturity), Williamson--99%/50% (all kernels dented), Saline--99%/99% (harvest maturity), Hamilton--99%/99% (harvest maturity), Clay--99%/99% (harvest maturity), and Coles--99%/99%. (Jordan). INDIANA -Prevalence/severity in soybeans (physiologic maturity) by county: Boone--99%/5%, Dubois--99%/1%, Gibson--99%/5%, Greene--99%/10%, and Spencer -- 99%/1%. (Schall).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - IOWA - Monroe and Wapello Counties--prevalence trace to 2% in surveyed soybean fields (beans full size to physiologic maturity) week ending September 2. (Williams). ILLINOIS - Prevalence/severity on soybeans (physiologic maturity unless stated otherwise) by county September 15-16: Clark--99%/12%, Crawford--99%/5%, Richland--99%/10%, Wayne--99%/8% (harvest maturity), Williamson--99%/5% (beans full size), Saline--99%/15% (harvest maturity), Hamilton--99%/18% (harvest maturity), Clay--99%/20% (harvest maturity), and Coles--99%/12%. (Jordan). INDIANA - Prevalence in soybeans (physiologic maturity) by county: Morgan--3%, Lawrence--1%, Spencer--1%, and Greene--1%; averaged 1% in 12 sites. (Schall).

SOYBEAN POD AND STEM BLIGHT (<u>Diaporthe phaseolorum var. sojae</u>) - IOWA - Prevalence in surveyed soybean fields (physiologic maturity) by county week ending September 2: Mahaska--50%, Lucas--10%, Adair -- 5%, and Wapello -- 3%. Current prevalence in surveyed soybean fields (physiologic to harvest maturity) by county: Crawford--40%, Adams -- trace, and Johnson -- 60%. (Williams). MINNESOTA - Prevalence of pycnidia on commercial soybean (harvest maturity or near) stems by county: Fillmore--86%, Mower--35%, Freeborn--80%, Faribault--85%, Rock--72%, Pipestone--75%, Chippewa--96%, and Kandiyohi--55%. Pycnidia generally confined to basal half of stems examined. (Stromberg). ILLINOIS - Prevalence on stems and on pods of soybeans (physiologic maturity unless stated otherwise) by county: Vermilion--11%, 4%; Clark--9%, 4%; Crawford--2%, 3%; Richland--23%, 19%; Wayne--70%, 50% (harvest maturity); Williamson--5%, 22% (beans full size); Saline--85%, 65% (harvest maturity); Hamilton--47%, 32% (harvest maturity); Clay--52%, 42% (harvest maturity); and Coles--34%, 30%. (Jordan). INDIANA - Prevalence/severity in soybeans (physiologic maturity unless stated otherwise) by county: Boone--5%/ 5%, Hendricks--15%/1%, Morgan--60%/2%, Lawrence--60%/1%, Dubois--20%/2%, Spencer--0%/5%, Gibson--10%/1%, Greene--1%/1%, Clay--1%/0%, Parke--50%/0% (harvest maturity), and Montgomery--80%/3% (harvest maturity); averaged 26%/2% in 12 sites. (Schall). OHIO - Prevalence on stems only of soybean plants (physiologic maturity) by county: Franklin--75%, Greene--6%, and Licking--15%. (Hite).

BROWN STEM ROT (Phialophora gregata) - IOWA - Prevalence in surveyed soybean fields (physiologic maturity) by county week ending September 2: Mahaska-90%, Wapello-70%, Adair-80%, and Lucas-75%. Current prevalence on soybeans (physiologic to harvest maturity) by county: Crawford-40%, Carroll-70%, Adams-50%, Monroe-80%, and Johnson-90%. (Williams). MINNESOTA - Fillmore, Mower, Faribault, Martin, Jackson, Rock, Pipestone, Chippewa, and Kandiyohi Counties--prevalence 100% except Freeborn County with 80% in commercial soybeans (harvest maturity or near). Vascular browning restricted to basal 15 cm of stem. (Stromberg).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on soybeans (physiologic maturity unless stated otherwise) by county September 15-16: Vermilion--14%, Clark--6%, Crawford--3%, Richland--23%, Wayne--75% (harvest maturity), Williamson--5% (beans full size), Saline--40% (harvest maturity), Hamilton--42% (harvest maturity), Clay--34% (harvest maturity), and Coles--54%. (Jordan).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - MINNESOTA - Prevalence/severity on commercial soybeans by county: Mower--100% of scattered plants in fields with few green leaves remaining on plants/75% of green leaf surface; Martin--75% of plants/mycelia and conidia on basal two-thirds of stem (field harvest at survey); and Jackson, Chippewa, and Kandiyohi--100% of few remaining green leaves/90% (plants at or near harvest maturity). (Stromberg).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - ILLINOIS - Prevalence on soybeans (physiologic maturity unless stated otherwise) by county September 15-16: Clark--5%, Crawford--4%, Richland--23%, Wayne--50% (harvest maturity), Williamson--4% (beans full size), Saline--20% (harvest maturity), Hamilton--42% (harvest maturity), Clay--38% (harvest maturity), and Coles--25%. (Jordan).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - ILLINOIS - Prevalence on soybeans (physiologic maturity) by county September 15-16: Vermilion--6%, Clark--4%, Crawford--3%, Richland--7%, Wayne--16% (harvest maturity), and Clay--9% (harvest maturity). (Jordan).

THANATEPHORUS ROOT AND STEM ROT (<u>Thanatephorus cucumeris</u>) - INDIANA - Greene County--prevalence 1% in soybeans (physiologic maturity); averaged trace in 12 sites. (Schall).

SEED PURPLE STAIN (Cercospora kikuchii) - INDIANA - Prevalence in soybeans (physiologic maturity) by county: Morgan--1%, Lawrence--2%, Dubois--4%, Spencer--1%, Gibson--5%, and Greene--1%; averaged 1% in 12 sites. (Schall).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - IOWA - Prevalence/severity in soybeans (beans full size to physiologic maturity) by county week ending September 2: Mahaska-99%/10-20%, Lucas-90%/severity not given, Adair-99%/20-25%, and Wapello-80%/40%. (Williams).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - ILLINOIS Vermilion County--prevalence 20%/severity 5% in soybeans (physiologic maturity). (Jordan).

TOBACCO RINGSPOT VIRUS - OHIO - Prevalence in soybeans (physiologic maturity) by county: Franklin--5% at edge of field and Greene--6% at edge of field. (Hite).

#### INSECTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA - Talladega County--larvae completely destroyed soybean stands in several fields. Fields with dead beans, stunted plants, and large areas of wind-lodged plants that cannot be harvested. Macon and Montgomery Counties--same conditions in 5 fields. (O'Daniel et al.).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - MISSISSIPPI - Clay, Monroe, Chickasaw, and Oktibbeha Counties--2nd to 5th instars 6-26 per 25 sweeps on late pod set stage soybeans, defoliation 10-50% in sampled fields. Many acres of late beans treated. (Anderson).

SOYBEAN LOOPER (<u>Pseudoplusia includens</u>) - SOUTH CAROLINA - Piedmont counties--sharply decreased on soybeans due to recent heavy rains increasing viral and fungal infections of this looper. (Douglass). NORTH CAROLINA - Coastal Plains area--localized and spot infestations of soybeans continued. Largest infestation 10 acres. (Hunt, Pleasants).

BEAN LEAF BEETLE (Cerotoma trifurcata) - ARKANSAS - Averages per 3 row ft of soybeans by county: Jackson-4.3, Lee-2.0, and Desha-3.9. (Dumas). OHIO - Most soybeans at harvest maturity. Adults aggregated on remaining green soybean plants in late-planted fields. Clinton County--averaged 2.6 per plant. Fayette County-averaged 1.5 per plant. Some pod damage. (Drees).

GREEN STINK BUG (Acrosternum hilare) - OKLAHOMA - Counts per row ft of soybeans by county: Wagoner, Muskogee, Haskell, Sequoyah, and Le Flore--averaged about 1 in many fields, up to 5 in occasional fields; and Hughes--ranged 2-3 in 4 fields. (Arnold). MISSISSIPPI - Adults and nymphs of this species and SOUTHERN GREEN STINK BUG (Nezara viridula) averaged per 25 sweeps of late-soybeans (late pod set stage) by county: Clay--10.6 on 200 acres, Monroe--8.4 on 100, Chickasaw--4.6 on 150, and Oktibbeha--15.8 on 200. (Anderson). KENTUCKY - Meade County--adults and nymphs up to 4 per row ft, damage economic on soybeans (pod fill) September 16. Controls applied on about 100 acres. (Raney, Dryden).

# WEEDS

COMMON CRUPINA (Crupina vulgaris) - IDAHO - New State record. Idaho County--collected in rangeland pasture site near Grangeville by J. Wright in June 1977. Previously collected between 1955 and 1977 but not reported. Determined by G. Lee. Apparently present long enough to occupy several acres. These weeds can become agricultural production problems. (Higgins).

#### COTTON

# INSECTS

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Adults per acre, % punctured cotton squares (and mean), % punctured bolls (and mean) by county September 9: Motley in control zone--2,000, 4-76% (63%), 4-20% (9.8%); Dickens in control zone--1,175, 14-100% (54.1%), 0-13% (3.1%); Kent in control zone--1,925, 45-100% (66.8%), 0-19%

(8.2%); Kent outside control zone--3,000, 50-83% (73.6%), 13-23% (16.7%); and Stonewall outside control zone--5,900, 59-83% (73.6%), 14-22% (17.6%). (Leser, Morrison). Boll weevil punctured squares by county: Crosby and Floyd September 13--0-40%; Glasscock, Upton, and Reagan September 16--mean 2%. (Byrd, Neeb). ARKANSAS - Northeastern area--adults still unusually light in cotton. (Kimbrough). GEORGIA - Adults trapped by county week ending September 17: Dooly--2. (Emery, Lambert).

BOLLWORMS (<u>Heliothis</u> spp.) - CALIFORNIA - Imperial County-TOBACCO BUDWORM (<u>H. virescens</u>) infestations very light to very heavy in cotton at El Centro and Boltville. Population generally beginning second buildup of season. (Hawkins, Flock). Riverside County--heavy on cotton at Blythe. Bale production estimated at 1 per acre; normal production is 1.75 bales per acre. One 160-acre field totally lost. Insecticide treatments inadequate except for new synthetic pyrethrins. (Reeves). Fresno County--3 BOLLWORM (<u>H. Zea</u>) larvae per 26 sweeps of cotton at Clovis. (Dunnegan). TEXAS - <u>H. Zea</u> and <u>H. virescens</u> counts on cotton by county September 13-16: Crosby and Floyd--eggs up to 100 per 100 terminals, larvae 0-70 per 100 plants, damaged squares 5-40%; Donley--damaged squares 1-10%; Pecos and Reeves--eggs 1 per terminal, larvae 0-17 and damaged squares 0-36 per 50 terminals; El Paso--eggs 4-6% and 8-14%, larvae 0-4% and 9-15%, damaged squares 2-5% and 6-22% in most fields. (Byrd et al.).

MISSISSIPPI - Statewide--majority of cotton matured beyond Heliothis spp. damaging stage. Still present in "green spots" of some fields and causing some boll damage. Harvest delayed due to earlier rains. Latest yield prediction on 1,430,000 acres of cotton in State at 490 pounds per acre. (Anderson). ALABAMA - Talladega and Lee Counties--Heliothis spp. eggs and larvae light in cotton fields for first time since June. (O'Daniel et al.). GEORGIA - H. virescens adults trapped by county week ending September 2: Dooly--3, Crisp--1, and Turner and Tift--0. Tift County--adults on "sugar line" on September 11 and 14, respectively: 68 and 52 H. virescens and 103 and 84 H. zea. (Gray, Lambert).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Imperial County-adults heavy in 1 cotton field at El Centro, 1+ per row ft. (Hawkins). Fresno County--3rd instar larvae at 5 per 100 plants at Clovis. (Dunnegan).

CABBAGE LOOPER (<u>Trichoplusia</u> <u>ni</u>) - OKLAHOMA - McClain County-defoliation averaged 100% in several untreated cotton fields. Grady and Washita Counties--defoliation heavy in many previously treated fields. (Arnold). ALABAMA - Talladega, Lee, and other counties--heavy counts defoliated cotton fields. Diseases and virus occurred within infested acreage. (O'Daniel et al.).

#### SUGAR BEETS

#### INSECTS

FALSE CELERY LEAFTIER (<u>Udea profundalis</u>) - CALIFORNIA - San Joaquin County--larvae heavy in <u>sugar beet field</u> at Stockton; 2-10 larvae per leaf in some parts of 100-acre field. (Brown).

# POTATOES, TOMATOES, PEPPERS

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - DELAWARE - Western Sussex County--infested 50-80% of untreated sweet peppers. (Burbutis, Kelsey).

#### BEANS AND PEAS

#### INSECTS

ELM LEAF BEETLE (<u>Pyrrhalta luteola</u>) - IDAHO - Ada County--adults moved from stripped elm trees and seriously damaged 25% of 3-acre snap bean field near Boise, August 8. (Saunders).

#### **DECIDUOUS FRUITS AND NUTS**

# INSECTS

PEACH TWIG BORER (Anarsia lineatella) - UTAH - Weber County-infested more than 50% of late peaches in market south of Ogden week ending September 19. Conspicuously heavier in late peaches than in early peach crop. (Davis). Box Elder County-infested 25% of fruits in orchard at south Willard. (Lindsay). IDAHO - Twin Falls County--62 males in pheromone trap August 29 to September 12 at Twin Falls. (Stoltz).

#### **ORNAMENTALS**

# INSECTS

AN ERIOPHYID MITE (<u>Eriophyes</u> <u>baccharipha</u>) - CALIFORNIA - New county record. Santa Barbara <u>County--collected</u> on <u>Baccharis</u> sp. "Twin Peaks" at Santa Barbara, by W. Gillette, August 18, 1977. Determined by T. Kono. (Kono, Gillette).

#### FOREST AND SHADE TREES

#### INSECTS

A SAWFLY (Nematus chalceus) - OREGON - Marion County-heavy infestation on dooryard planting of Salix matsudana cv. Tortuosa near Macleay. Collections of larvae and adults taken April 6 to May 30, 1977. Determined by D.R. Smith. First time larvae collected and associated with adult stage. (Westcott).

#### MAN AND ANIMALS

#### DISEASES

ST. LOUIS ENCEPHALOMYELITIS VIRUS - OHIO - Montgomery and Pickaway Counties--3 new viral isolates collected from <u>Culex pipiens</u>. (Berry).

# INSECTS

HORN FLY (<u>Haematobia</u> <u>irritans</u>) - OKLAHOMA - Major County--ranged 2,000-2,500 per head on cows and averaged 4,000 per head on bulls. (Arnold). MISSISSIPPI - Clay, Monroe, Chickasaw, and Oktibbeha Counties--adults ranged 100-400+ on cattle. (Anderson).

FACE FLY (<u>Musca autumnalis</u>) - MISSISSIPPI - Clay, Monroe, Chickasaw, and Oktibbeha Counties--adults averaged 3.6 per face on cattle. (Anderson).

A TABANID FLY (<u>Tabanus quinquevittatus</u>) - OHIO - New county record. Brown County--4 specimens collected from car along State Highway 774, south of Homerville, August 23, 1977. Collected and determined by B.M. Drees. (Drees).

MOSQUITOES - OREGON - Coos County--Aedes dorsalis adults very heavy in coastal community of Eastside. Schools near bay, restricted outside activities to prevent students from being bitten. Buildup apparently due to malfunctioning tide gate allowing high tidal water flow into marshy area. Treatment September 13 gave about 60% control, no larvae currently present. Remaining adults could survive another 14-21 days. (Gresbrink, Harrison).

# BENEFICIAL ORGANISMS & THEIR ENEMIES

# INSECTS

A PUNCTUREVINE STEM WEEVIL (<u>Microlarinus</u> <u>lypriformis</u>) - OKLAHOMA - New county records. Major County-light in puncturevine stems at Ringwood, September 20, 1977. Grant County-light at Lamont, September 21. Larvae collected and determined by D.C. Arnold. (Arnold).

# FEDERAL AND STATE PROGRAMS

#### INSECTS

MORMON CRICKET ( $\underline{Anabrus}$   $\underline{simplex}$ ) - OREGON - Very light in almost all areas where  $\underline{common}$  in  $\underline{1976}$ . Northern Wallowa County--populations significant only in Cherry Creek drainage. (Goeden, Gorham).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Lincoln County--larval feeding completed and pupation nearly 100% on range. (Iselin).

#### CORRECTIONS

CPPR 2(36):731 - SPOTTED KNAPWEED (Centaurea maculosa) - New County record. Modify phrase to read: Tehama County--small infestation detected in this county 20 miles west of Chester, Plumas County, ... (Hawkins).

CPPR 2(36):731 - A BRACONID WASP (Eubazus rotundiceps) - Delete Kootenai County.

CPPR 2(37):735, 750 - A LATRIDIID BEETLE (Melanophthalma distinguenda) should read A LATHRIDIID BEETLE.

#### HAWAII PEST REPORT

New Western Hemisphere Record - One adult of a LADY BEETLE (Pharoscymnus sp.) first collected from light trap at Ewa, Oahu, by J.W. Beardsley, October 4, 1976. Additional 5 specimens have been collected from light traps at Ewa, Honolulu International Airport, and Barbers Point Naval Air Station, Oahu, since then. Determined by R.D. Gordon. (Beardsley). Members of this predacious genus in most areas of Old World. (R.D. Gordon).

General Vegetables - LEAFMINER FLIES (Liriomyza spp.) counts and damage (90% of leaves heavily mined) heavy on bearing watermelon (5 acres) at Kahuku, Oahu. A 50% or more yield loss expected. Heavily mined 20-50% of leaves in another 15 acres of watermelon at various stages. BROAD MITE (Polyphagotarsonemus latus) heavy on 0.25-acre green pepper at Kahuku; all terminals show severe malformation and flower reduction. (Murai, L. Nakahara).

Fruits and Nuts - Several adults, larvae, and eggs of a NYMPHALID BUTTERFLY (Agraulis vanillae) recovered from Passiflora foetida and along border of commercial planting of lilikci (50 acres) at Kahuku. Foliar damage to lilikoi minor. (Murai, L. Nakahara).

Beneficial Insects - New island record for a STAPHYLINID BEETLE (Philothalpus analis). Lanai Island--larvae and several eggs of this predator recovered for first time in pineapple field at Lanai City, August 18, 1977. Adults first released in April 1977 to control pestiferous swarmings of several species of nitidulid beetles. Collected and determined by G. Taniguchi. (L. Nakahara).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A LADY BEETLE (Pharoscymnus sp.) - HAWAII - Oahu Island. (p. 786).

NEW STATE RECORD

#### WEEDS

COMMON CRUPINA (Crupina vulgaris) - IDAHO - Idaho County. (p. 782).

NEW COUNTY AND ISLAND RECORDS

#### INSECTS

AN ERIOPHYID MITE (Eriophyes baccharipha) - CALIFORNIA - Santa Barbara. (p. 784).

A PUNCTUREVINE STEM WEEVIL (Microlarinus lypriformis) - OKLAHOMA - Major and Grant. (p. 785).

A STAPHYLINID BEETLE (Philothalpus analis) - HAWAII - Lanai. (p. 786).

A TABANID FLY (Tabanus quinquevittatus) - OHIO - Brown. (p. 785).

WESTERN CORN ROOTWORM ( $\underline{\text{Diabrotica}}$   $\underline{\text{virgifera}}$ ) - WYOMING - Washakie. (p. 778).

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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Coleosporium perillae (Syd.) a rust Det. F.G. Pollack	uredial	on Perilla leaves from cargo	Japan	Los Angeles	CA
Dacus dorsalis Hendel oriental fruit fly Det. R. Iwamoto	larval	in bananas from baggage	Hawaii	Hilo	CA
Epilachna paenulata (Germar) a leaf-feeding coccinellid Det. R.D. Gordon	adult	with brome- liad plants from cargo	Argentina	Los Angeles	CA
Hylastes attenuatus Erichson a scolytid beetle Det. D.M. Anderson	all	in dunnage from barges	West Germany	Wilmington	NC
Hylobius sp. a weevil Det. D.M. Anderson	larval	in pine dunnage with cargo	Netherlands	Cleveland	НО
Rhagoletis cerasi (Linnaeus)  European cherry fruit fly Det. V.L. Blackburn	larval	in cherries from baggage	West Germany	Groton	AL
Udea ferrugalis (Hübner)  a pyralid moth Det. V.L. Blackburn	larval	on leaves from baggage	Portugal	Boston	USA
Helicella krynickii (Andrz.) a helicid snail Det. R. Munkittrick	adult	on container vans	Italy	Savannah	NC



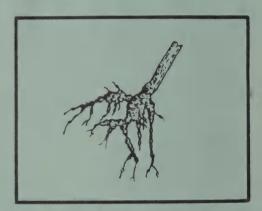
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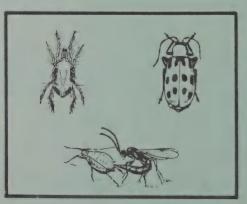
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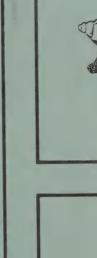
VOL. 2 NO. 40

Reserve aSB823 U53

October 7, 1977

# Cooperative PLANT PEST REPORT







U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

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# **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

#### Current Conditions

FALL ARMYWORM heaviest in 20 years on sweet corn in New York. (p. 793). Damaged new wheat and rye in parts of Oklahoma, Illinois, Ohio, and Virginia (p. 794), and damaged pastures in parts of Texas and Alabama (p. 795).

Prevalence of SOYBEAN POD AND STEM BLIGHT on soybean stems 40% and usually much higher in parts of Kansas, Minnesota, Illinois, and Indiana. (p. 797).

#### Detection

A RHOPALID BUG in New Jersey is new for the Western Hemisphere. (p. 802).

An ICHNEUMONID WASP is new for Hawaii. (p. 796).

For new county records see page 802.

LITTLE CHERRY VIRUS confirmed in commercial sweet cherry orchards in the United States. (p. 800).

First known field infestation of BEET ARMYWORM in Ohio. (p. 800).

"Pictorial key to species of the genus Anastrepha (Diptera: Tephritidae)" by George C. Steyskal, 1977. This up-to-date key to 155 species incorporates and separately lists the species described since Stone 1942a, some new synonymy, and a brief bibliography.

Available from the Entomological Society of Washington,  $\rm c/o$  Department of Entomology, Smithsonian Institution, Washington, DC 20560

Reports in this issue are for the week ending October 30 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

CORN EARWORM (Heliothis zea) - KANSAS - Larval feeding continued in sorghum heads (mostly milk dough). Larval averages per head by county week ending September 23: Kingman--0-3.1 in 6 fields, Sedgwick--3.1-5.6 in 3, Wilson--trace in 1, Montgomery--0-2 in 2, Elk--2.0 in 1, Labette--trace in 1, Riley--trace to 1.2 in 3 (and averaged 5 per sweep of 14-inch alfalfa), Comanche--0-1.7 in 3, and Kiowa--0.1-0.4 in 2. Current larval averages per sorghum head (milk dough) by county, 1 field each: Pratt--0.9, Marshall--0.4, and Leavenworth--1.0. (Salsbury et al.). VIRGINIA - Eastern area--continued problem on soybeans but decreased below earlier peaks. Treatments no longer widespread as beans beginning to mature. Westmoreland County--very large larvae still infested beans near harvest maturity, unusual, in 1 field. Isle of Wight County--activity on soybeans continued but peak over. (Allen).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Southern area-adults about 1 per sweep in most alfalfa fields, no nymphs. (Lovett). WEST VIRGINIA - Mason County--nymphs few, 2 per stem in some areas, in alfalfa field. Damaged 25% of stems. (Hacker).

# CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - ILLINOIS - Prevalence/severity on commercial field corn (physiologic maturity) by county week ending September 23: Piatt--99%/10%, De Witt--99%/20%, Logan--99%/15%, Mason--99%/5%, Tazewell--99%/12%, and Fulton--99%/15%. (Jordan). MICHIGAN - Prevalence/severity on corn (growth stage) by county week ending September 23: Monroe--15%/5-7% (all kernels dented), Lenawee--5%/10% (maturity), and Branch--60%/50% (maturity). (Singh).

COMMON SMUT (Ustilago maydis) - ILLINOIS - Prevalence on commercial field corn (physiologic maturity) by county week ending September 23: Piatt--14%, De Witt--16%, Logan--12%, Mason--21%, Tazewell--19%, and Fulton--18%. (Jordan). MICHIGAN - Prevalence on corn (growth stage) by county week ending September 23: Monroe--5-10% (all kernels dented), Lenawee--5-15% (physiologic maturity), and Branch--30-40% (physiologic maturity). (Singh).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - ILLINOIS - Prevalence/severity on commercial field corn (physiologic maturity) by county week ending September 23: De Witt--65%/15%, Mason--54%/12%, and Fulton--70%/18%. (Jordan).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - ILLINOIS - Prevalence/severity on commercial field corn (physiologic maturity) by county week ending September 23: Logan--72%/18%, Mason--55%/20%, and Tazewell--48%/15%. (Jordan).

SORGHUM LEAF RUST (Puccinia purpurea) - KANSAS - Eastern area-still infected unharvested sorghum week ending September 23. Prevalence on sorghum by county: Pottawatomie and Labette-80% and Coffey-80-100%. Continued to affect forage and grain sorghum. Current prevalence by county: Pottawatomie-100%, Nemaha-80-100%, Brown-100%, Leavenworth-100%, and Geary-100%. (Sim).

SOOTY STRIPE (Ramulispora sorghi) - KANSAS - Prevalence on sorghum by county week ending September 23: Osage--30%, Coffey--20%, and Wilson--50%. (Sim).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Prevalence in stalks of corn (near maturity) and of lodging by county, 5 surveyed fields each unless stated otherwise, week ending September 23: Pawnee--12-52% in 5 fields, 0; Pratt--4-80% in 5, 2% in 2 fields; Stafford--38-95% in 3, 4-28% in 3 fields; Kiowa--48-100% in 4, 4% in 1 field; Edwards--4-64% in 5, 8% in 1 field; Jefferson--4% in 3, 0; Doniphan--8% in 1, 0; and Atchison--36% in 1 of 2, 4% in 1 field. (Sim).

ROSEUM ROT (Gibberella roseum f.sp. cerealis) - KANSAS - Prevalence in stalks of corn (near maturity) and of lodging by county, 5 fields each surveyed unless stated otherwise, week ending September 23: Pawnee-4-12% in 2 fields, 0; Pratt-4-10% in 2, 0; Edwards-4% in 1, 0; Jefferson-8-56% in 2, 0; Brown-36-48% in 2, 0; Doniphan-4-88% in 5, 72% in 1 field; and Atchison-40% in 2 of 2 surveyed fields, 4% in 1; Nemaha-currently 5-15% in 3 fields. 0. (Sim).

MAYDIS CORNSTALK ROT (Diplodia maydis) - KANSAS - Prevalence in stalks of corn (near maturity) by county: Doniphan--12% in 1 of 5 fields week ending September 23, and Nemaha--currently 5-10% in 1 field. (Sim).

ROTS - NEBRASKA - Prevalence of Fusarium stalk rots and of Fusarium ear rots in corn (physiologic maturity unless stated otherwise) by county week ending September 23: Otoe--10-36% (all kernels dented); Johnson--44-90%, 20%; Dakota--5-24%, 30%; and Dixon--15%, 10%. Fusarium stalk rot only by county: Cass, Douglas, and Cedar--30%, Lancaster--35%, Washington--60%, Burt--12-95%, Thurston and Pierce--12%, Madison--18%, and Platte--16%. (Poe).

MINNESOTA - Prevalence of Fusarium ear rot and Fusarium stalk rot in commercial dent corn (harvest maturity) by county: Isanti-23%, 8%; Benton-18%, 9%; Stearns-15%, 21%; Pope-4%, 2%; Otter Tail-15%, 18%; Clay-18%, 32%; Wilkin-6%, 36%; Stevens-16%, 9%; Lac qui Parle-trace, 7%; Lincoln-2%, 24%; Yellow Medicine-8%, 21%; Murray-12%, 33%; Brown-52%, 24%; Yellow Medicine-8%, 21%; Murray-12%, 33%; Brown-52%, 24%; and Steele-35%, 27%. Incidence of ear rot generally associated with insect injury to ear, primarily by EUROPEAN CORN BORER (Ostrinia nubilalis). Continued wet weather expected to further aggravate ear rot prevalence and severity, and this weather combined with high winds, will severely lodge some fields. (Stromberg).

ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis), of Cladosporium rots, of FUJIKUROI ROT (Gibberella fujikuroi), and of Penicillium rots on ears of commercial field corn (physiologic maturity) by county week ending September 23: Piatt--8%, 4%, 9%, penicillium rot not reported; Tazewell--17%, 6%, 26%, 19%; Fulton--28%, 4%, 14%, 20%; Logan--roseum rot not reported, 3%, 6%, 5%; roseum rot and cladosporium rot not reported, fujikuroi and penicillium rot as stated: De Witt--8%, 4%, and Mason--16%, 17%. Prevalence of roseum stalk rot on commercial field corn (physiologic maturity) by county: Piatt--3%, De Witt--5%, Logan--4%, Mason--13%, Tazewell--12%, and Fulton--28%. (Jordan).

INDIANA - Prevalence of ear rots caused by Fusarium sp. (58%), Penicillium sp. (16%), Gibberella (14%), Diplodia (2%), and unknowns (10%) and of stalk rots caused by Anthracnose (mostly) and Gibberella in corn (physiologic maturity) by county: Shelby-18%, 38%; Bartholomew-4%, 40%; Jennings-18%, 32%; Scott-2%, 48%; Clark-42%, 66%; Ohio-28%, 12%; Dearborn-30%, stalk rots not reported; Franklin-10%, 18%; Union-15%, 11%; Henry-9%, stalk rots not reported; and Madison-20%, 12%; averaged 18%, 25% in 11 sites. Lodging averaged 5% with maximum of 28°. (Schall).

GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) - ILLINOIS - Prevalence/severity of leaf spot and prevalence of stalk rot on commercial field corn (physiologic maturity) by county week ending September 23: Piatt-99%/25%, 12%; De Witt-99%/30%, 15%; Logan-99%/18%, 11%; and Tazewell--99%/18%, 2%. (Jordan).

SORGHUM BACTERIAL STREAK (Xanthomonas holcicola) - KANSAS - East-central and southeastern areas-still on sorghum week ending September 23; prevalence on sorghum by county: Coffey-trace, Douglas-60%, Wilson-10%, and Labette-100%. Current prevalence: Pottawatomie-60% in grain sorghum field and Leavenworth-100% in forage sorghum field. (Sim).

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Statewide-larvae continued to feed on late grain sorghum. Carroll and Montgomery Counties--larvae in fields of Sudangrass (boot stage) averaged 0.2 per stalk. Decreased due to cool, wet weather. (Anderson). WEST VIRGINIA - Mason and Putnam Counties--less than 10% ear infestation in late-planted corn. Some foliar damage, most damage confined to ear tips. Most growers green chopping corn. (Hacker). NEW YORK - Long Island and Upstate area-larvae heaviest in 20 years on sweet corn. Hudson Valley and Finger Lakes region--hundreds of acres abandoned due to heavy infestations. Effective treatments not available, control hampered. (Willson).

SORGHUM WEBWORM (Celama sorghiella) - OKLAHOMA - Pawnee County-infested 20% of grain sorghum heads. (Arnold). KANSAS - Southeastern area-heavier than usual in late sorghum week ending September 23. Larvae per head of late bloom to soft dough sorghum by county, 1 field each: Wilson--4, Elk--5, Montgomery--8, and Labette--5. (Hilbert, White).

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - Percent of sorghum stalks tunneled by larvae by county week ending September 23: Kiowa--10-30% in 2 soft dough fields; Wilson, Montgomery, Elk, and Labette--10-60% (1 field per county). Currently 1 field per county: Marshall--35%, Kiowa--60%, Pratt--20%, and Leavenworth--50%. (Hilbert et al.). WISCONSIN - Southern area-third adult flight continued in blacklight traps. Southern and southwestern areas--larvae, 2nd through 5th instar, common in corn fields. Stalk breakage due to larval injury and winds much more prevalent west of Madison than to the east. Breakage of 25% common in some fields, often above the ear. Western area-significant losses due to ear drop expected in some fields. (Lovett).

PENNSYLVANIA - European corn borer averages per 5 corn plants by county: Erie--0.5 in 4 fields and Crawford--1 in 1. (Masteller, Palisin).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - ILLINOIS - Noted in corn as far north as Jefferson County. Infestation up to 70% in occasional fields in extreme southern counties. (Black).

CHINCH BUG (Blissus leucopterus stage) - KANSAS - Riley County--few nymphs (some in red stage) behind leaf sheaths of some bloom stage sorghum plants scattered among mature plants in fields. Adults in sorghum heads decreased in field under observation. Many adults gathered for hibernation in Andropogon scoparius (little bluestem) in 1 northern area. Nemaha County--light behind lower leaf sheaths of green corn stalks in some fields. (Bell).

SORGHUM MIDGE (Contarinia sorghicola) - KANSAS - Elk and Labette Counties--adults trace on sorghum (soft dough) week ending September 23. (Hilbert, White). Leavenworth County--adults currently heavy on blooming heads of late-maturing stalks in 1 sorghum field (mostly soft dough) (Hilbert); Riley County--adults trace on blooming heads in 1 field (mostly mature). (Bell).

#### SMALL GRAINS

#### DISEASES

WHEAT LEAF RUST (Puccinia recondita) - KANSAS - Eastern and south-central are as-wides pread on volunteer wheat. Many fields of heavily infected volunteer wheat may serve as inoculum source next spring if left in present condition. This rust able to overwinter in State. Wheat leaf rust reported from volunteer wheat in Wabaunsee, Jefferson, Dickinson, Marion, Harvey, Sedgwick, Sumner, Harper, Barber, Kiowa, Pratt, Stafford, Barton, and McPherson Counties. (Sim).

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Washita and Caddo Counties--ranged 5-6 per row ft with 60-100% damage in most fields of wheat (2 or more weeks old). Ottawa County--averaged 1 per row ft in rye. (Arnold). ILLINOIS - Adams and Pike Counties--damaging infestations on new rye seedings. (Black). OHIO - Miami County--larvae damaged summer-seeded rye and soybeans September 20. This species appeared to migrate from mature soybean field to rye planted as plowdown for potatoes. Larvae, 4-8 per sq ft, totally consumed rye in 10-acre field. (Goedde). VIRGINIA - Still problem in rye cover crops; many fields completely destroyed before damage noticed. Newly planted grain crops should be watched almost daily. (Allen).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - Riley County--nymphs (mostly red stage) averaged 12 (adults 0.3) per plant on 8-inch volunteer wheat in field week ending September 23. (Bell).

#### TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - TEXAS - Madison County-infested almost 100% of pastures September 22. (Garrett). ALABAMA - Macon, Limestone, Cullman, Franklin, and Cleburne Counties--late developing population damaged pastures of 1,000+acres of young winter grazing mixtures. (Faw et al.). OHIO - Cuyahoga County--heavy, up to 15 larvae per sq ft on golf course turf September 21. (Niemczyk).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - ALABAMA -Bullock County--larvae reached economic damage levels in some pastures of winter small grain and grass mixtures. Controls applied. (Stone).

BLUEGRASS BILLBUG (Sphenophorus parvulus) - OHIO - Warren County--damaged turf in nursery at Loveland September 21. Spotty dead patches scattered throughout fields, 90% of stems in heavily damaged areas show larval feeding. Samples yielded 14.0 larvae (47.8%), 6.4 pupae (21.8%), and 8.9 adults (30.4%) per sq ft. Find indicates partial second generation in southern area; first time second generation noted in State. (Frost, Niemczyk).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - New county records. Kings County-adults collected from St. Augustinegrass at Corcoran, by L. Tos, August 3, 1977. Tulare County-adults collected on grass at Tulare, by C. Benton, August 19. Both determined by A. Hardy. (Hawkins).

#### **FORAGE LEGUMES**

# DISEASES

SUMMER BLACK STEM (Cercospora zebrina) - KANSAS - Prevalence on alfalfa by county week ending September 23: Labette--100% on 28-inch plants and Wilson--50-100% on 16 to 22-inch plants. Northeastern and east-central areas--currently, most common alfalfa disease. Taller alfalfa more affected than shorter alfalfa. Prevalence/severity (and plant height in inches) by county: Nemaha--trace to 100%/moderate (6-24 inches), Jefferson and Leavenworth--trace/not given (6), Geary--80%/moderate (24), Morris--100%/heavy (24), Shawnee--40%/light (15). (Sim).

LEPTOSPHAERULINA LEAF SPOT (Leptosphaerulina briosiana) - KANSAS - Labette County--affected 40% of alfalfa plants (6-inch) in 1 field week ending September 23. (Sim).

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - On alfalfa in Washita County and with BEET ARMYWORM (S. exigua) on newly planted alfalfa in Jackson County--heavy, up to  $8 \, \frac{\text{exigua}}{\text{per sq}}$  ft. (Arnold). KANSAS - Riley County--larvae averaged 3 per sweep of alfalfa (14 inches) week ending September 23. (Bel1).

GREEN CLOVERWORM (Plathypena scabra) - KANSAS - Riley County--averaged 5 per sweep of alfalfa (14 inches) week ending September 23. (Bell). Barber County--currently caused serious defoliation of alfalfa (16 inches) near Hardtner; larvae averaged 23 per sweep. (Salsbury).

CABBAGE LOOPER (Trichoplusia ni) - KANSAS - Riley County--larvae averaged 3 per sweep of alfalfa (14 inches), about 30% of larvae infected with nuclear polyhedral virus week ending September 23. (Bell).

GRASSHOPPERS (Melanoplus spp.) - MISSOURI - Central and west-central areas--moderate to heavy damage to field margins of fall-seeded alfalfa; 10% of stands (average) completely defoliated in 3 fields. (Munson).

# HAWAII PEST REPORT

New State Record - One female of an ICHNEUMONID WASP (Calliephialtes grapholithae) first collected at Kailua, Oahu, by J.W. Beardsley, October 10, 1976. Between October 1976 and March 1977, additional 2 females and 1 male collected by 3 different individuals at Kuliouou, Honolulu, and Manoa Valley, Oahu. Determined by R.W. Carlson. (Beardsley).

Forest and Shade Trees - An ADELGID (Pineus pini) heavy in 50 acres of Pinus sp. (pine) trees at Polipoli, Kula Forest Reserve, Maui. First noted at Polipoli in July 1973 but noticeably spread and increased only in past 1.5 years. Heavy dieback on about 5% of 8 to 15-foot saplings. Larvae and pupae of its predator, Leucopis obscura (a chamaemyiid fly), reared to adults, heavy on sampled pine terminals. (Miyahira).

Snail Pest - Eggs to adults, 4 inches long, of GIANT AFRICAN SNAIL (Achatina fulica) heavy, recently reported from Kona, Hawaii Island. About 1,000 snails collected from backyard plantings (total of 0.25 acre) of lettuce, peanuts, soybeans, corn, and cauliflower. (Matayoshi).

#### SOYBEANS

#### DISEASES

SOYBEAN BROWN SPOT (Septoria glycines) - KANSAS - Linn County-prevalence 100% in soybean plants in 1 field week ending September 23. (Sim). ILLINOIS - Prevalence/severity on commercial soybeans (physiologic maturity) by county week ending September 23: De Witt-99%/90%, Logan-99%/90%, Mason-99%/85%, and Fulton-99%/90%. (Jordan).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - KANSAS - Prevalence on soybeans by county week ending September 23: Coffey-trace, Neosho and Wilson--10%, and Montgomery--5%. (Sim). ILLINOIS - Prevalence/severity on commercial soybeans (physiologic maturity) by county week ending September 23: De Witt--70%/15%, Logan--85%/20%, Mason--80%/15%, and Fulton--85%/25%. (Jordan). INDIANA - Prevalence on soybean seeds (harvest maturity) by county: Shelby--5%, Bartholomew--10%, Jennings--1%, Scott--2%, Clark--1%, Ohio--8%, Dearborn--4%, and Franklin--8%; averaged 4% in 11 sites. (Schall). MICHIGAN - Hillsdale County--prevalence 60%/severity 10-20% in soybeans (seeds beginning to develop) week ending September 23. (Singh).

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - KANSAS - Prevalence in 1 soybean field each by county: Brown--60% and Doniphan--40%. (Sim). MINNESOTA - Prevalence of pycnidia on stems and on pods of commercial soybeans (at or near harvest maturity) by county: Isanti--21%, 0; Pope--100%, 0; Lincoln--92%, 0; Yellow Medicine--98%, 0; Wilkin--95%, 12%; Traverse--100%, 24%; Murray--100%, trace; Brown--100%, 7%; and Steele--100%, trace. Pycnidia on stems covered entire length; pycnidia on pods generally restricted to basal pods. (Stromberg).

ILLINOIS - Prevalence of soybean pod and stem blight on stems and on pods (physiologic maturity unless stated otherwise) of commercial soybeans by county week ending September 23: Piatt--90%, 25% (harvest maturity); De Witt--18%, 7%; Logan--34%, 22%; Mason--55%, 25%; Tazewell--54%, 42% (harvest maturity); and Fulton--86%, 74%. (Jordan). INDIANA - Prevalence on stems and on seeds of soybeans (harvest maturity) by county: Shelby--20%, 0; Bartholomew--99%, 0; Jennings--99%, 2%; Scott--98%, 2%; Clark--80%, 5%; Ohio--99%, 0; Dearborn--40%, 0; Franklin--99%, 0; Union--95%, 0; Henry--10%, 6%; and Madison--2%, 2%; averaged 67%, 2% in 11 sites. (Schall). MICHIGAN - Prevalence on stems and on pods of soybeans (physiologic maturity) by county week ending September 23: Monroe--10%, 0; Lenawee--20%, 0; and Branch--35%, 1%. (Singh).

BROWN STEM ROT (<u>Phialophora gregata</u>) - MINNESOTA - Prevalence in commercial soybeans (at or near harvest maturity) by county: Isanti--100%, Pope--100%, Wilkin--100%, Traverse--85%, Lac qui Parle--38%, Lincoln--82%, Yellow Medicine--86%, Murray--86%, Brown--100%, and Steele--86%. Vascular browning restricted to basal 15 cm or less of stem in majority of plants. (Stromberg). ILLINOIS - Prevalence on commercial soybeans (physiologic maturity) by county week ending September 23: De Witt--62%, Logan--70%, Mason--45%, and Fulton--55%. (Jordan).

CHARCOAL ROT (Macrophomina phaseolina) - KANSAS - Linn County-prevalence 10% in soybeans in 1 field week ending September 23. (Sim). ILLINOIS - Prevalence on commercial soybeans (physiologic maturity unless stated otherwise) by county week ending September 23: Piatt-82% (harvest maturity), De Witt-32%, Logan-37%, Mason-40%, Tazewell-64% (harvest maturity), and Fulton-42%. (Jordan).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - MINNESOTA - Lac qui Parle County--prevalence 25%/severity 15% in commercial soybean field (physiologic maturity). (Stromberg). MICHIGAN - Prevalence/severity on soybeans by county week ending September 23: Hillsdale--25%/70% (beans beginning to develop) and Lenawee--5%/40-50% (physiologic maturity). (Singh).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - ILLINOIS - Prevalence on commercial soybeans (physiologic maturity unless stated otherwise) by county week ending September 23: Piatt-42% (harvest maturity), De Witt-7%, Logan-16%, Mason-23%, Tazewell-48% (harvest maturity), and Fulton-37%. (Jordan).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - ILLINOIS - Prevalence on commercial soybeans (physiologic maturity unless stated otherwise) by county week ending September 23: Piatt--65% (harvest maturity), De Witt--15%, Logan--34%, Mason--27%, Tazewell--60% (harvest maturity), and Fulton--58%. (Jordan).

SEED PURPLE STAIN (Cercospora kikuchii) - INDIANA - Prevalence on soybean seeds (harvest maturity) by county: Shelby--2%, Scott--5%, Clark--2%, Dearborn--4%, Union--trace, and Madison--1%; averaged 1% in 11 sites. (Schall).

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) - KANSAS - East-central and southeastern areas-most widespread soybean disease week ending September 23. Prevalence by county: Coffey and Labette--100%, Woodson--60-100%, and Neosho--trace to 100%. Pottawatomie, Nemaha, and Brown Counties--current prevalence 100% in all surveyed soybean fields. (Sim). MINNESOTA - Prevalence/severity in 1 commercial soybean field each (physiologic maturity) by county: Isanti--100%/10% and Lac qui Parle--100%/5%. (Stromberg). MICHIGAN - Prevalence/severity on soybeans (physiologic maturity unless stated otherwise) by county week ending September 23: Monroe--90-100%/25%, Lenawee--80-100%/20%, Hillsdale--70-80%/10% (beans beginning to develop), and Branch--95%/60%. (Singh).

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) - ILLINOIS - Mason County--prevalence 40%/severity 50% on soybeans (physiologic maturity) in 1 commercial field. (Jordan).

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - MISSOURI - New county records. Franklin County-found in soybeans at Union, by J. Cupp, July 5, 1977; Warren County-on soybeans at Marthasville, by H. Sterrett, July 18; Audrain County-on soybeans at Mexico, by D. Schnarre, July 26. Detection sites were single commercial fields and heavily infested. All determined by E. Palm. (Francka, Palm).

BEAN POD MOTTLE VIRUS - KANSAS - Serologically identified from soybeans in counties below. This virus transmitted by BEAN LEAF BEETLE (Cerotoma trifurcata) which was present in majority of surveyed fields. Viral prevalence by county: Coffey-trace, Neosho--60%. Montgomery--10%, and Labette--15%. (Sim).

#### INSECTS

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Jackson County--about 800 acres of soybeans needed treatment. Alachua and Levy Counties--50% of 3,700 acres needed treatment; population currently heaviest for year. (Baker).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Pawnee County-defoliation 50% in 100-acre field of soybeans. (Arnold).

SOYBEAN LOOPER (<u>Pseudoplusia includens</u>) - FLORIDA - Jackson County-heavy in some soybean fields, treatment effective. (Linker). Alachua and Levy Counties--serious in 500 of 3,700 acres past 14 days. (Baker). OKLAHOMA - Wagoner, Muskogee, Haskell, Sequoyah, and Le Flore Counties--common on soybeans; heaviest, 5 per row ft, in Sequoyah County. (Arnold).

#### **PEANUTS**

# INSECTS

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - OKLAHOMA - Marshall County--up to 14 (averaged 9) per row ft of peanuts. (Arnold). FLORIDA - Alachua County--5% of 2,500 acres of peanuts treated. (Baker).

LESSER CORNSTALK BORER (<u>Elasmopalpus</u> <u>lignosellus</u>) - TEXAS - Comanche County--infested up to 80% of peanut plants September 22. (Moore). OKLAHOMA - Marshall County--infestations almost averaged 100% on dryland peanuts. (Arnold).

TWOSPOTTED SPIDER MITE (<u>Tetranychus urticae</u>) - VIRGINIA - Isle of Wight County--continued serious in spot infestations throughout county. Treatment continued so as to maximize foliar growth already marred by other problems, primarily dry weather. Yellowed foliage had been attributed to dry weather rather than to mites. Crop not hurt as badly as earlier believed. (Allen).

#### COTTON

#### INSECTS

BOLL WEEVIL (Anthonomus grandis) - GEORGIA - Pheromone trap catches decreased with only 1 adult in Crisp County week ending September 24. Field populations increased where insecticides stopped. (Emery, Lambert). TENNESSEE - McNairy County--8 adults collected from 2 of 6 traps September 22-28. (Locke).

# POTATOES, TOMATOES, PEPPERS

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KENTUCKY - Fayette County--larvae of this species, FALL ARMYWORM (Spodoptera frugiperda), and CORN EARWORM (Heliothis zea) damaged 60-70% of bell and hot peppers in untreated research field September 19. Larval ratios--1 corn earworm to 10 fall armyworms to 23 European corn borers. (Brandon).

BEET ARMYWORM (Spodoptera exigua) - OHIO - Lucas County--larvae created problem in 1 potato field being harvested. Larvae 1-4 in potato tubers exposed to soil surface. Damage occurred immediately after application of vine killer. Potatoes will be stored at 50 degree F for indeterminate time. First known field infestation of beet armyworm known to occur in State although 1 to 6 S. exigua adults trapped for last month. Determinations of larvae by R.W. Rings and of adults by E.L. Todd. (Rings, Schroeder).

#### COLE CROPS

#### INSECTS

CABBAGE WEBWORM (Hellula rogatalis) - CALIFORNIA - Larvae collected for first time in San Joaquin Valley. New county record. Fresno County--specimens found on leaves of plant buds of cauliflower at Sanger by L. Boots, August 23, 1977. Determined by T. Eichlin. (Dunnegan).

#### **DECIDUOUS FRUITS AND NUTS**

# DISEASES

LITTLE CHERRY VIRUS - Confirmed in commercial sweet cherries in the United States for first time. WASHINGTON - Yakima County represents earliest collection for U.S., earlier than collection in Okanogan County reported in CPPR 1(44-47):838. Benton and Chelan are new county records. Yakima County--budwood collected from 6 trees at Wapato by L. Parish in July 1975. Indexed positive after 18-month incubation by L. Parish. Benton County-budwood collected from 2 cherry trees at Kennewick by M. Aichele in June 1976. Indexed positive after 18-month incubation by M. Aichele. Both orchards owned by same orchardist; budwood had been transferred between both orchards. Chelan County--1977 biometric survey found 1 positive tree each in 2 orchards 10 mi apart at Wenatchee. Collector and collection date unknown. Determined positive through acridine orange fluorescent microscopy test conducted by B. Billeter. Okanogan County--another 4 positive trees found at Oroville and 1 at Riverside in separate backyards in July 1977. All positive trees have been or will be destroyed. (D.S. Jackson).

#### FOREST AND SHADE TREES

#### INSECTS

TULIPTREE APHID (Macrosiphum liriodendri) - CALIFORNIA - New county record. Marin County--adults on Teaves of tuliptree at San Rafael, July 27, 1977. Collected by G. Hiroshima and C. Twohy. Determined by T. Kono. (Kono et al.).

#### MAN AND ANIMALS

#### INSECTS

HOUSE FLY (Musca domestica) - FLORIDA - Bradford, Citrus, Clay, and Gadsden Counties--most complaints in 6-7 years in residential areas near caged layer poultry operations since early September. One poultryman spent \$8,300 in 1 month for control. (Koehler).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

WHEAT STEM RUST (<u>Puccinia graminis</u> var. <u>tritici</u>) - KANSAS - Sumner and Barton Counties--traces on volunteer wheat, unknown if this stem rust can overwinter in State. (Sim).

#### INSECTS

GRASSHOPPERS - OKLAHOMA - Beaver County--damage to young wheat continued in panhandle counties, counts up to 6 per sq ft. (Arnold). KANSAS - Southwestern and west-central areas and as far north as Colby, Thomas County, in northwestern area week ending September 23--Melanoplus sanguinipes damaged some wheat field borders. (Gates). Adult flights continued at low altitudes in this area (Shuman et al.); none to date at high altitudes but some may be occurring; substantial flights hit windshields of cars in Stanton County (Salsbury). Controls applied but results poor. (Gates). Current averages per sq yd of mostly Melanoplus sanguinipes on borders of 1 to 3-inch wheat by county: Kiowa--2-8 in 8 fields, Comanche--1-6 in 2, Barber--trace to 2 in 2, and Pratt-trace to 3 in 3; 0-12 drill rows eaten to ground level. Significant numbers of M. packardii, M. differentialis, and M. bivittatus in border of 1 wheat field in Kiowa County near Mullinville. (Salsbury). Some wheat field border damage in Lane County as far north as Dighton and several fields with border damage near Colby. (Shuman).

SCREWWORM (Cochliomyia hominivorax) - Six cases reported from continental United States September 4-10 as follows: New Mexico 2 and Arizona 4. (Meadows). Total of 680 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,075 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 114,260,000 as follows: Texas 64,181,800, New Mexico 11,276,500, Arizona 38,801,700. Total of 196,860,800 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### WEEDS

CANADA THISTLE (<u>Cirsium arvense</u>) - CALIFORNIA - New county record. El Dorado County--detected in small infestation, 0.01 acre at Meeks Bay, South Lake Tahoe, by W.J. Farlatte, August 9, 1977. Confirmed by D. Barbe and M. Keffer. (Hawkins).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A RHOPALID BUG (Brachycarenus tigrinus (Schilling)) - NEW JERSEY - Cumberland County--2 adult males collected from wheat on farm at north Vineland by R. Morris, August 18, 1977. Determined by R. Hoebeke; confirmed by J.L. Herring. (Hoebeke). Occurring throughout the Palearctic Realm, this bug normally found on Berteroa and Sisymbrium (crucifers), also on Trifolium (legumes) and Cirsium (composites). (Herring).

NEW STATE RECORD

#### INSECTS

An ICHNEUMONID WASP (<u>Calliephialtes</u> <u>grapholithae</u>) - HAWAII - Oahu Island. (p. 796).

NEW COUNTY RECORDS

#### DISEASES

LITTLE CHERRY VIRUS - WASHINGTON - Benton and Chelan. (p. 800).

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - MISSOURI - Franklin, Warren, and Audrain. (p. 798).

#### INSECTS

CABBAGE WEBWORM (Hellula rogatalis) - CALIFORNIA - Fresno. (p. 800).

SOUTHERN CHINCH BUG ( $\underline{Blissus}$  insularis) - CALIFORNIA - Kings and Tulare. (p. 795).

TULIPTREE APHID ( $\underline{\text{Macrosiphum}}$   $\underline{\text{liriodendri}}$ ) - CALIFORNIA - Marin. (p. 800).

#### WEEDS

CANADA THISTLE (Cirsium arvense) - CALIFORNIA - El Dorado. (p. 801).

#### CORRECTIONS

CPPR 2(36):722 - POWDERY MILDEW (Microsphaera diffusa) should be DIFFUSA POWDERY MILDEW.

CPPR 2(38):767 - SCLEROTIORUM BLIGHT (Sclerotina sclerotiorum) should be (Sclerotinia sclerotiorum).

CPPR 2(39):780 - SOYBEAN BROWN SPOT (Septoria glycines) - ILLINOIS - williamson--(all kernels dented) should be (beans full size).

CPPR 2(39):783 - BOLLWORMS (Heliothis spp) - CALIFORNIA - normal production is 1.75 bales per acre ... should be ...  $\underline{2.2}$  bales per acre ... (Hawkins).

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LIGHT TRAP COLLECTIONS	IONS Tempera-Interior Tempera-Interior Ture 'P. (Precip- Ture 'P. (Inthes)	Story	1/8 90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		BALLES IN	A STATE OF S	10M2 14301	STORY TO STORY STO	0000	STINIAN SORIES	Standard And And And And And And And And And An	STED TO SEASON STORY	Manual School Sc	STORES SEGISTED STORES OF THE	ON CHOOS OF THE COLOR OF THE CO	Standing Sta	ensions adopods	EDISQUE (MIOWY MIRE)	Trichold bod rate de de la	Treson to the control of the control
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FLORIDA Gainesville 9/22-28		 BL				25		1						1		77	9	73		
INDIANA (Counties) Randolph 9/16-22 Tippecanoe 9/16-22		 BL	7	20 00				49				3 3 4	19	12 18	9 8		-			
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PENNSYLVANIA (Districts) North East 9/21-27 South East 9/21-27		 BL	1 2					4						1 2	8		77	7		
TEXAS College Station 9/20-27		 BL	8				n	91							9		0	73	П	
WEST VIRGINIA (Counties) Monroe 9/26 Putnam 9/23, 25		 BL						22 8							21					
WISCONSIN Harcock 9/21-23 Mazomanie 9/9-27		BL	1					3					15	35	2 7					
UV = Ultraviolet																				

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Uredo sp. a rust Det. F. Pollack	uredial	on leaves of Gravia plants	India	Kennedy Airport	USA
Copitarsia sp. a noctuid moth Det. W.D. McLellan	larval	on snap dragon cut flowers	Guatemala	New Orleans	LA
Gymnetron sp. a weevil Det. D.R. Whitehead	adult	on grass stems from baggage	Portugal	Boston	CA
Hylastes opacus Er. a scolytid beetle Det. D.M. Anderson	all	in wood dunnage with cargo	West Germany	Charleston	SC
<pre>Lobesia botrana (Schiff.) an olethreutid moth Det. D.M. Odermatt</pre>	larval	in grapes from aircraft stores	Portugal	Kennedy Airport	USA
Spodoptera pecten Guenée a noctuid moth Det. E.L. Todd	adult	in aircraft holds	Asia	Seattle	USA
Trogoderma granarium Everts khapra beetle Det. R.F. Bollinger	larval	with crates of wood carvings	India	Charleston	SC
Theba pisana (Müller)  white garden snail Det. G. Burgess	adult	on walls in ship's stores	Unknown	Port	



## UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service Hyattsville, Maryland 20782

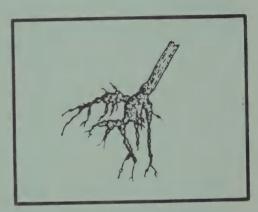
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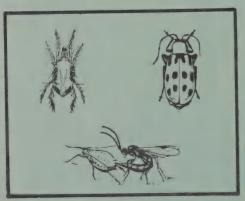


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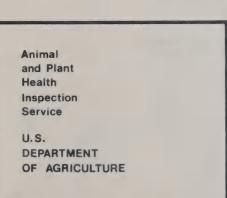
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VOL. 2 NO. 41

October 14, 1977

## Cooperative PLANT PEST REPORT









This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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#### COOPERATIVE PLANT PEST REPORT

#### HIGHLIGHTS

#### Current Conditions

FALL ARMYWORM damaged young small grains in parts of Kansas, North Carolina, and Maryland. (p. 809).

#### Detection



WHITE CHRYSANTHEMUM RUST in Pennsylvania is new for North America. Also new for New Jersey. (p. 812).

Other new State records include CABBAGE SEEDPOD WEEVIL in Maryland (p. 812), an EMPIDID FLY and an OAK KERMES SCALE in Texas, a BRACONID WASP in Oklahoma (p. 813), and a WEEVIL in Connecticut (p. 815).

For new county and island records see page 815.

#### Special Reports

Beet Leafminer and Spinach Leafminer now Considered as One Species, <u>Pegomya</u> <u>hyoscyami</u> (Panzer) (Diptera: Anthomyiidae) (p. 818).

Reports in this issue are for the week ending October 7 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

CORN EARWORM (Heliothis zea) - NEW MEXICO - Curry and Roosevelt Counties -- larval feeding unusually heavy in sorghum heads. Damage to tight full heads severe in some fields. (Iselin). OKLAHOMA - Caddo and Washita Counties -- complex of H. zea, GREEN CLOVERWORM (Plathypena scabra), and FORAGE LOOPER (Caenurgina erechtea) averaged 300 per 10 sweeps in alfalfa. Payne County--H. zea averaged 1 per 15 grain sorghum heads. (Arnold). KANSAS -Larval averages per sorghum (hard dough) head by county, 1 field each: Kingman--0.6 and Butler--0.2. (Salsbury). Jefferson County--larvae (0.5 inch to full grown) fed in scattered maturing sunflower heads in 1 field; feeding concentrated on seed in centers of head and in fleshy tissue of heads. (Bell, White). NORTH CAROLINA - Injury levels below threshold on all late soybeans week ending September 30. Chatham, Iredell, Rowan, Davidson, and Davie Counties -- subeconomic infestations in only 2 late scattered fields. Economic damage ended for 95% of 1977 soybean crop. (Hunt).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON MAIZE RUST (Puccinia sorghi) - IOWA - Prevalence 99% in surveyed corn fields (physiologic maturity) and severity as stated by county: Adair--5-10%; Carroll, Jasper, Marion, and Tama--10-15%; and Polk and Washington--3-20%. (Williams).

HELMINTHOSPORIUM LEAF SPOT (Helminthosporium carbonum) - IOWA - Prevalence/severity in surveyed corn fields (physiologic maturity) by county: Carroll--trace/1-3%, Polk--20%/1-5%, and Washington-trace/1-3%. (Williams).

NORTHERN LEAF BLIGHT (Helminthosporium turcicum) - MICHIGAN - St. Joseph County--trace in corn (all kernels dented). (Singh).

STALK ROTS - NEBRASKA - Prevalence of cornstalk (physiologic maturity) breakage caused by EUROPEAN CORN BORER (Ostrinia nubilalis) and Fusarium spp. by county: Lancaster--17-46% in 4 fields, Otoe--40-60% in 3, Johnson--28-50% in 4, Pawnee--35-65% in 4, Gage--18-42% in 4, Jefferson--12-37% in 4, Saline--14-32% in 5, and Seward--9-36% in 2. (Poe). MISSOURI - Perry County--prevalence of Gibberella sp., Diplodia sp., and Fusarium sp. 10% in corn (physiologic maturity) September 21-23 and 28-30. (Foudin). MINNESOTA - Prevalence of Fusarium spp. in commercial dent corn (harvest maturity) by county: Olmsted--12%, Winona--4%, Fillmore--18%, Mower--24%, Freeborn--38% (no-till field), Faribault--39%, Martin--24%, Nobles--45%, Rock--24%, Pipestone--4%, Renville--12%, and Sibley--16%. EUROPEAN CORN BORER (Ostrinia nubilalis) very heavy in many fields, much stalk breakage and some ear droppage. (Stromberg).

INDIANA - Stalk rot prevalence/lodging caused by Anthracnose (71%) often combined with Gibberella (12%), and Fusarium (6%), Diplodia (1%), and unknown fungi (9%) in corn (physiologic maturity) by

county: Clinton--10% 0, Cass--10% 0, Fulton--34%/4%, Porter--42%/2%, Jasper--26% 2%, White--24% 0, and Tippecanoe--2%/0; averaged 15%/1% in 10 sites. (Schall). OHIO - Prevalence of mostly GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum) and Fusarium stalk rots in corn fields (physiologic maturity) by county week ending September 30: Brown (2 fields)--60% and 63%, Butler--5%, Clark--35%, Clinton--45%, Logan--12%, Madison--20%, Mercer--1%, Preble--trace, and Ross--5%. (Hite). MICHIGAN - Prevalence of G. roseum f.sp. cerealis stalk rot in corn (harvest maturity unless stated otherwise) by county: St. Joseph--15% (all kernels dented), Berrien--5%, Wayne--15%, St. Clair--95%, and Shiawassee--40%. (Singh).

EAR ROTS - NEBRASKA - Prevalence of ear rots in corn (physiologic maturity) caused by Fusarium spp. and/or Gibberella spp. in husks by county: Lancaster--0-7% in 4 fields, Otoe--2-6% in 3, Johnson--3-5% in 4, Pawnee--0-6% in 3, Gage--0-4% in 4, Jefferson--1-6% in 4, Saline--0-2% in 5, and Seward--0-3% in 2. (Poe). SOUTH DAKOTA - Eastern area--Fusarium, Penicillium, Alternaria, and other fungal prevalence 25-100%/severity trace to 2% mostly on corn ear tips injured by bird and/or insect feeding. (Jons). NORTH DAKOTA - Southeastern area--Fusarium, Penicillium, Alternaria, and other fungal prevalence 25-100%/severity trace to 2% mostly on corn ear tips injured by bird and/or insect feeding. (Jons).

MISSOURI - Perry County--ear rot prevalence caused by Gibberella sp. and Fusarium sp. 15-20% on corn (physiologic maturity) September 21-23 and 28-30. (Foudin). IOWA - Central area--ear rots caused by Fusarium and Penicillium spp. with trace levels of Aspergillus flavus started to appear. Prevalence in surveyed corn fields (physiologic to harvest maturity) by county: Polk--30-60%, Washington--10-15%, Jasper--20%, and Adair--30%. (Williams). MINNESOTA - Prevalence of primarily Fusarium spp. ear rots in commercial dent corn by county: Olmsted--35%, Winona--9%, Fillmore--21%, Mower--18%, Freeborn--42%, Faribault--38%, Martin--12%, Nobles--trace, Rock--18%, Pipestone--6%, Renville--28%, and Sibley--34%. High levels of ear rots associated with insect injury and wet weather favoring fungal growth. (Stromberg).

INDIANA - Prevalence of ear rots caused by Fusarium sp. (67%) and Penicillium sp. (25%) following insect damage to ear, unknown fungi (6%), Gibberella (1%), and Nigrospora (1%) in corn (physiologic maturity) by county: Clinton-32%, Howard-22%, Cass-16%, Fulton-12%, St. Joseph-34%, Porter-12%, Jasper-30%, White-18%, and Tippecanoe-2%; averaged 20% in 9 sites. (Schall). OHIO - Most kernel rots followed larval injury by FALL ARMYWORM (Spodoptera frugiperda), EUROPEAN CORN BORER (Ostrinia nubilalis), and CORN EARWORM (Heliothis zea). Prevalence of mostly Fusarium, Penicillium, and Cephalosporium ear and kernel rots in corn (physiologic maturity unless stated otherwise) by county week ending September 30: Brown (2 fields)-5%, 5%; Butler-100% (all kernels dented) and 90% after severe larval injury, Clark-90% kernel rot after larval injury, Clinton-2%, Logan-trace to 1%, Madison-20% after larval injury, Mercer-14% after larval injury, Preble-1%, and Ross-50% kernel rot at ear tip after larval injury. (Hite).

STEWART'S WILT (<u>Erwinia</u> stewartii) - MICHIGAN - St. Joseph County-prevalence 10%/severity 25% in corn (all kernels dented). (Singh).

#### INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NORTH CAROLINA - Piedmont, western and southern Coastal Plains-this species and FALL ARMYWORM (Spodoptera frugiperda) caused severe ear drop from shank damage in scattered corn fields week ending September 30. Burke and Wake Counties--25-40% shank damage common in 8 Piedmont and Coastal Plains fields. Ear drop 10+% in scattered fields. Early harvest will greatly reduce loss. (Miller, Hunt).

#### SMALL GRAINS

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Summer County-larvae (up to 9.5 inch) averaged 1-2 per row ft of wheat (6 inches) near Wellington. Larvae fed above and below ground; most plants showed foliar injury; few plants cut off. (Salsbury). Wabaunsee County--most plants showed light feeding injury to wheat (5 inches) grown as "nurse crop" in seedling alfalfa field; larvae up to 0.25 inch. (Bell). NORTH CAROLINA - Piedmont and mountain areas--damage severe on about 500 acres of early planted small grains September 22-29. (Hunt). Coastal Plains and Piedmont--larval damage continued in small grain fields. Edgecombe, Johnston, Wake, and Durham Counties--current defoliation heavy in 10+ acres per county; 15 larvae per sq ft of soil surface common. Cool weather will slow down feeding, but damage likely until hard frost. (Hunt, Sweeting). MARYLAND - Eastern Shore and southern counties--still heavy in rye cover crop; 7,000 acres infested. (Hellman, Pinto).

#### TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - NORTH CAROLINA - Piedmont counties of Rowan, Iredell, Davidson, Alamance, Franklin, and Davie--damaged about 275 acres of small grains for grazing September 26-29. Damaged fields ranged 3-25 acres. (Bradley, Hunt).

SOUTHERN CHINCH BUG (Blissus insularis) - CALIFORNIA - New county records. Contra Costa County-adults collected on St. Augustinegrass at Pleasant Hill by J. deFremery, September 1, 1977. Stanislaus County-adults on leaves of St. Augustinegrass at Newman. Collected by V. Perry, September 23. Both determined by A. Hardy. (Hardy et al.).

#### FORAGE LEGUMES

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Garfield County--damaged 1 seedling alfalfa field at Waukomis. Payne County--averaged 7 per 10 sweeps of alfalfa. (Arnold).

#### SOYBEANS

#### DISEASES

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - SOUTH DAKOTA - Roberts, Grant, Deuel, Hamlin, Brookings, Moody, Minnehaha, Lake, Kingsbury, and Codington Counties--prevalence 10-15% mostly on stems of soybean (near maturity to harvest maturity). (Jons). NORTH DAKOTA - Richland County--prevalence 5-10% on stems only in 2 soybean fields (harvest maturity). (Jons). MINNESOTA - Prevalence of pycnidia on commercial soybeans (harvest maturity unless stated otherwise) by county. On stems only: Mower--8% (physiologic maturity), Freeborn--35% (no-till field at physiologic maturity), Rock--100%, Pipestone--87%, and Sibley--100%. On stems and on pods: Faribault--100%, 9%; Jackson--100%, trace; and Renville--100%, 6%. (Stromberg).

MISSOURI - Pemiscot, Stoddard, Mississippi, Bollinger, Perry, Jasper, Lawrence, and Vernon-prevalence almost 100% on soybean plants/severity moderate to heavy on pods (physiologic maturity) September 21-23 and 28-30. (Foudin). INDIANA - Prevalence on stems and on seeds of soybeans (harvest maturity except for Jasper County with physiologic maturity) by county: Clinton--83%, 1%; Howard--75%, 5%; Cass--93%, 2%; Fulton--75%, 0%; Porter--90%, 0%; Jasper--25%, 0%; White--66%, 3%; and Tippecanoe--63%, 2%; averaged 53%, 1% in 10 sites. (Schall). OHIO - Prevalence on stems and on pods of soybeans (harvest maturity unless stated otherwise) by county week ending September 30: Brown--99%, 50% and 99%, 45% in second field; Butler-99%, 5%; Clark-99%, trace; Clinton-99%, trace; Darke-10%, 0%; Logan-50%, 0%; Madison-90%, 0%; Mercer-1%, 0% (seeds full size); Preble-50%, 5% and 25%, 5% in second Ross--99%, 0%. (Hite). MICHIGAN - Prevalence on soybean (physiologic maturity unless stated otherwise) stems by county: St. Joseph--20%, Berrien--30-50%, Van Buren--50-70%, Calhoun--85-100% (harvest maturity), Wayne--95-100%, St. Clair--70-85%, Genesee--25-30%, and Shiawassee--95-100% (harvest maturity). (Singh).

A FUNGUS - OHIO - Statewide--moldy soybeans (mature) in top 1-8 pod clusters prevalent in many fields September 30. Probably Diaporthe sp. but may not be the common D. phaseolorum var. sojae. Identification pending further extensive culturing. Prevalence/number of top pod clusters with moldy seed (harvest maturity) by county: Brown--100%/top 1-6 clusters and 100%/1-8 clusters, Butler--50%/2-3, Clark--50%/1-7, Clinton--90%/4-6, Darke--10%/2-5 in 2 fields, Logan--50%/3-5, Madison--40%/2-3, Preble--90%/2-8 in 2 fields, and Ross--40%/2-3. (Hite).

SOYBEAN BROWN SPOT (Septoria glycines) - IOWA - Prevalence/severity in surveyed soybean fields (seeds full size to harvest maturity) by county: Tama--20%/5% and Washington and Keokuk--60%/10-20%. (Williams).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - INDIANA - Jasper County--prevalence in soybean seed (physiologic maturity) 10%; averaged 1% in 10 sites. (Schall).

BROWN STEM ROT (Phialophora gregata) - IOWA - Prevalence in surveyed soybean fields (seeds full size to harvest maturity) by county: Tama-50%; Polk and Jasper-70%; and Washington and Keokuk-80-90%. (Williams). SOUTH DAKOTA - Moody County-prevalence 5% in 1 soybean field (physiologic maturity). (Jons). NORTH DAKOTA - Richland County--prevalence 5% in 1 soybean field (physiologic maturity). (Jons). MINNESOTA - Prevalence in commercial soybeans (harvest maturity unless stated otherwise) by county: Mower-76% (physiologic maturity), Freeborn-100% (no-till field at physiologic maturity), Faribault-58%, Martin-45% (physiologic maturity), Jackson-60%, Rock-68%, Pipestone-48%, Renville-54%, and Sibley-58%. (Stromberg).

CHARCOAL ROT (Macrophomina phaseolina) - MISSOURI - Prevalence in soybeans (physiologic maturity) by county September 21-23 and 28-30: Pemiscot-90%, Stoddard-80%, Mississippi-75%, Bollinger-75%, Perry-50%, Jasper-25%, Lawrence-40%, and Vernon-20%. (Foudin).

A ROT (<u>Fusarium sp.</u>) - MISSOURI - Pemiscot, Stoddard, Mississippi, Bollinger, Perry, Jasper, Lawrence, and Vernon--prevalence 50-75% in soybeans (physiologic maturity) September 21-23 and 28-30. (Foudin).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - IOWA - Prevalence/severity in surveyed soybean fields (seeds full size to harvest maturity) by county: Washington--10%/5-20% and Tama--80%/60-80%. (Williams). MINNESOTA - Prevalence/severity on soybean stems and leaves (physiologic maturity) by county: Freeborn--22%/80% (no-till field) and Martin--65%/90%. (Stromberg). MICHIGAN - Prevalence/severity of soybeans (physiologic maturity) by county: St. Joseph--30%/5%, Berrien--15%/20%, Wayne--5%/25%, St. Clair--35%/70%, Genesee--10%/45%, Van Buren--55-60%/30%. (Singh).

SOYBEAN GLYCINES ANTHRACNOSE (<u>Glomerella glycines</u>) - MISSOURI - Pemiscot, Stoddard, Mississippi, Bollinger, Perry, Jasper, Lawrence, and Vernon Counties--prevalence 80-95%/severity light to moderate on stems only of soybeans (physiologic maturity) September 21-23 and 28-30. (Foudin).

SEED PURPLE STAIN (<u>Cercospora kikuchii</u>) - MISSOURI - Prevalence on soybeans (physiologic maturity) by county, 25 seeds each: Pemiscot-8%, Stoddard-8%, Mississippi-24%, Bollinger-32%, Perry-24%, Jasper-20%, Lawrence-24%, and Vernon-24%. (Foudin). IOWA - Tama, Story, Polk, and Jasper Counties--prevalence 1-5% on soybean (harvested seed). (Williams). INDIANA - Prevalence on soybean seed (harvest maturity) by county: Clinton-1%, Howard-3%, Cass--trace, Fulton-3%, Porter--trace, and Tippecanoe--4%; averaged 1% in 10 sites. (Schall).

TOBACCO RINGSPOT VIRUS - MICHIGAN - Prevalence in soybeans (growth stage) by county: Calhoun--30% (harvest maturity), Wayne--10-15% (physiologic maturity), and St. Clair--5-15% (physiologic maturity). (Singh).

SOYBEAN MOSAIC VIRUS - MICHIGAN - Kalamazoo County--prevalence 15% in soybeans (physiologic maturity). (Singh).

#### INSECTS

VELVETBEAN CATERPILLAR (<u>Anticarsia gemmatalis</u>) - OKLAHOMA - Kay County--this species and <u>SOYBEAN LOOPER</u> (<u>Pseudoplusia includens</u>) caused nearly 100% defoliation in field of soybeans at <u>Blackwell</u>. Wagoner, Muskogee, Sequoyah, Haskell, and Le Flore Counties-continued moderate to heavy with field in Wagoner County 50% defoliated. (Arnold). FLORIDA - Mostly in Alachua County--enough to require treatment on 50% of 3,700 acres of soybeans. (Baker).

#### SUGAR BEETS

#### INSECTS

SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) - MONTANA - Carbon County--larvae heavily infested sugar beets in 20-acre field at Park City; much damage, but Rhizoctonia disease and SUGAR BEET NEMATODE (Heterodera schachtii) also present so damage from larvae difficult to assess. Nearly every plant infested. (Burns, Jensen).

#### **COLE CROPS**

#### INSECTS

CABBAGE SEEDPOD WEEVIL (Ceutorhynchus assimilis) - MARYLAND - New State record. Howard County--collected from broccoli heads at Fulton by W. Cantelo, July 4, 1975. Determined by R.E. Warner. (Cantelo).

#### **ORNAMENTALS**

#### DISEASES

WHITE CHRYSANTHEMUM RUST (Puccinia horiana P. Hennings) PENNSYLVANIA - New North American record. Northampton County-infected Chrysanthemum spp. plants at Bethlehem first noted by S.
Kranyecz in mid-September. Tentatively determined by L. Nichols,
September 29, 1977. Collected and determined by L. Forer, October
3; confirmed by F. Pollack. Of 115 cultivars grown by S. Kranyecz,
30 show symptoms with light severity. (Forer). NEW JERSEY - New
State record. Union County--infected chrysanthemum leaves collected
at Mountainside by P.V. Weber, October 4, 1977. Determined by L.
Forer; confirmed by F. Pollack. Also collected at Cranford.
(Pagliaro). To date in both States, infections found only in
hobbyist plantings either in greenhouses or outdoors, and surveys
underway in hobbyist and commercial plantings. (Forer, Pagliaro).

Known to occur in Argentina, western Europe, Republic of South Africa, People's Republic of China, Japan, and New Zealand, this disease has caused complete plant loss of Chrysanthemum spp. Symptoms first appear as yellow spots which later turn brown in the centers on upper surface of leaves; large waxy white to yellow spots develop on under surfaces. A less serious rust in this country, COMMON CHRYSANTHEMUM RUST (Puccinia chrysanthemi) appears as chocolate brown spots on the leaves. (PPQ).

#### FOREST AND SHADE TREES

#### INSECTS

NATIVE ELM BARK BEETLE (<u>Hylurgopinus rufipes</u>) - NORTH DAKOTA - New county record. Grand Forks County--adults collected from sticky board traps on elm at Grand Forks by J. Staley and C. Scholl, August 9, 1977. Determined by E. Balsbaugh. (Scholl).

AN EMPIDID FLY (Syndyas polita) - TEXAS - New State record.

Montgomery County--collected 14 miles east of Richards within
Sam Houston National Forest, May 13, June 1 and 2, 1974. Hardin
County--collected 7 miles north of Saratoga, May 30 and 31, June
13, 14, and 15, 1975. About 20-30 collected from sticky traps on
several Pinus echinata (shortleaf pine) and P. taeda trees
infested by SOUTHERN PINE BEETLE (Dendroctonus frontalis). Both
collected by W.N. Dixon. Both determined by L. Knutson. (Dixon).

AN OAK KERMES SCALE (Kermes branigani) - TEXAS - New State record. Brewster County--all stages heavy on Quercus grisea (gray oak) along road in Big Bend National Park, June 15, 1976. Both collected and determined by M. Kosztarab. (Kosztarab).

#### MAN AND ANIMALS

#### INSECTS

HORN FLY (<u>Haematobia irritans</u>) - FLORIDA - Alachua County--averaged 400 per an<u>imal</u> in small beef herd at Gainesville. (Mead).

CATTLE TAIL LOUSE (<u>Haematopinus</u> <u>quadripertusus</u>) - FLORIDA - Alachua County--adults averaged 2-3 per tail; eggs more than 100 per tail in herd at Gainesville. (Mead).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

A BRACONID WASP (Perilitus coccinellae) - OKLAHOMA - New State record. Payne County--several adults reared from adults of Hippodamia convergens (convergent lady beetle) at Stillwater area, by J. Racioppi, May 1977. Determined by P.M. Marsh. (Arnold).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - Napa County-large leaf elm infected at Angwin about 4 miles from previously infested site. (Mote).

#### INSECTS

GRASSHOPPERS - OKLAHOMA - Major County--damaged wheat margins. Washita and Caddo Counties--mostly Melanoplus differentialis damaged alfalfa and margins of wheat. (Arnold). KANSAS - Sherman, Thomas, Wallace, Logan, Gove, Greeley, Wichita, Scott, Lane, Hamilton, Kearny, Finney, and Stanton Counties--mostly

Melanoplus sanguinipes economic, 2 or more per sq yd of wheat (seedling) in borders of some fields. Northwestern Stanton, Hamilton, northwestern Kearny, western and southern Greeley, and southwestern Wallace Counties—heaviest and most consistent damage to wheat borders in dryland areas. Border damage found only occasionally in other counties listed. Adults made up about 80% of population and nymphs 20%. (Shuman). Butler County—averaged 4 per sq yd, noticeable border damage to seedling alfalfa in 1 field near De Graff. (Salsbury).

NEBRASKA - Major rangeland species were <u>Ageneotettix deorum</u>, <u>Aulocara elliotti</u>, <u>Melanoplus sanguinipes</u>, and <u>Trachyrhachys kiowa</u>. Cherry and Sheridan Counties and along North Platte River-up to 70 per sq yd of rangeland. Knox, Boyd, and Holt Counties-up to 40 per sq yd of rangeland. Predominant cropland species in western half of State were <u>Melanoplus bivittatus</u>, <u>M. sanguinipes and M. differentialis</u>. Major species in eastern half of State were <u>M. bivittatus and M. femurrubrum</u>. No significant levels of parasitism. (Bell et al.). <u>MINNESOTA</u> - Egg pod averages per sq ft of alfalfa field by county: Becker--0.2, Polk--0.2, Chippewa--0.13, Swift--0.2, Wilkin--0.4, Pipestone--0.2. Some adults, mostly <u>Melanoplus femurrubrum</u> and <u>M. differentialis</u>, 1-2 per sq yd. (Sreenivasam).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Kern, Tulare, Kings, and Fresno Counties--nonsterile adult catches as of September 29 reached 4,305. Only 9 thus far in Fresno County. (Reed).

#### WEEDS

HYDRILLA (Hydrilla verticillata) - CALIFORNIA - San Diego County-second infestation in small pond near Fallbrook, about 80% of pond infested. (Barbe).

#### HAWAII PEST REPORT

General Vegetables - CARMINE SPIDER MITE (Tetranychus cinnabarinus) heavy (nearly 100% of leaves infested) on 0.25 acre of pole beans at Kealakekua, Hawaii Island, older leaves chlorotic. (Yoshioka).

Ornamentals - New Island record for COCONUT SCALE (Aspidiotus destructor) moderately infested about 100 Rhapis excelsa (potted palms 4 to 6 ft tall) at Hilo, Hawaii Island, September 8, 1977. Collected by E. Yoshioka. Determined by J.W. Beardsley. (Higa, Yoshioka). Heavy infestations by all stages of ORCHID WEEVIL (Orchidophilus aterrimus) on vanda orchid (1 acre abandoned field) at Hilo. Adults 125+ in 100-ft row. (Mau).

#### DETECTION

NEW NORTH AMERICAN RECORD

#### DISEASES

WHITE CHRYSANTHEMUM RUST (<u>Puccinia</u> horiana P. Hennings) - PENNSYLVANIA - Northampton County. (p. 812).

NEW STATE RECORDS

#### DISEASES

WHITE CHRYSANTHEMUM RUST (<u>Puccinia</u> horiana) - NEW JERSEY - Union County. (p. 812).

#### INSECTS

A BRACONID WASP (Perilitus coccinellae) - OKLAHOMA - Payne County. (p. 813).

CABBAGE SEEDPOD WEEVIL (Ceutorhynchus assimilis) - MARYLAND - Howard County. (p. 812).

AN EMPIDID FLY (Syndyas polita) - TEXAS - Montgomery County. (p. 813).

AN OAK KERMES SCALE (Kermes branigani) - TEXAS - Brewster County. (p. 813).

A WEEVIL (Lissorhoptrus chapini chapini) - CONNECTICUT - New Haven County--males and females collected from salt marsh at Branford by N.C. Olmstead in August 1975. Determined by R.E. Warner. (Olmstead).

NEW COUNTY AND ISLAND RECORDS

#### INSECTS

COCONUT SCALE (Aspidiotus destructor) - HAWAII - Hawaii. (p. 814).

AN EMPIDID FLY (Syndyas polita) - TEXAS - Hardin. (p. 813).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - Grand Forks. (p. 813).

SOUTHERN CHINCH BUG ( $\underline{\text{Blissus}}$  insularis) - CALIFORNIA - Stanislaus. (p. 809).

#### CORRECTIONS

CPPR 2(39): 775, 776, 780, and 781 - All disease information from IOWA should be for the week ending September  $\underline{16}$  instead of for the week ending September 2. (Williams).

CPPR 2(40):789 - Reports in this issue are for the week ending September  $30 \dots$ 

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# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

Desti- nation	IV	CA	Ð	SC	SC	USA	NC	USA
Port of Entry	Saint	Honolulu	Baltimore	Charleston	Charleston	Boston	Monroe	Kennedy Airport
Probable Origin	Italy	Hawaii	United Kingdom	Japan	India	Italy	Italy	Ireland
Host	in wood pallets of tile	in bitter melons from baggage	in oak logs	in dunnage with steel pipe	with bags of tamarind powder	with pine cones from baggage	on container vans of machinery	in soil with clover plants
Life	adult	larval	all	larval	larval	adult	adult	cyst
	Camponotus vagus (Scopoli) an ant Det. D.R. Smith	Dacus cucurbitae Coquillet melon fly Det. R. Kunishi	Dryocoetes villosus (Fabricius) a scolytid beetle Det. E. J. Ford	Ovalisia sp. a buprestid beetle Det. J.M. Kingsolver	Trogoderma granarium Everts Khapra beetle Det. R.F. Bollinger	Helicella sp.  a helicid snail  Det. V. Blackburn	Helicella krynickii (Andrz.) a helicid snail Det. R. Munkittrick	Globodera rostochiensis (Woll.)  golden nematode Mul. & Stone Det. W. Friedman

Beet Leafminer and Spinach Leafminer now Considered as One Species Pegomya hyoscyami (Panzer) (Diptera: Anthomyiidae)

#### George C. Steyskal 1/

ABSTRACT. The beet leafminer and the spinach leafminer, although bearing distinct common names, are considered as one species, Pegomya hyoscyami (Panzer), with  $\underline{P}$ . betae (Curtis) a synonym.

The latest list of Common Names of Insects (special publications of the Entomological Society of America 1970, 1975) cite 2 species of leafminers, the beet leafminer, Pegomya betae (Curtis), and the spinach leafminer, Pegomya hyoscyami (Panzer). Chiefly since the work of Chillcott (1959) and Aguilar and Missonnier (1957, 1962) on the American and the European faunas, respectively, an attempt was made to distinguish these 2 taxa as distinct species. Steyskal (1970) distinguished a third species of this complex on beets in Egypt and Cyprus as Pegomya mixta Villeneuve and expressed the opinion that additional species would eventually be recognized in both the Old and New World faunas.

Hennig (1973) has revised this opinion. In his extensive treatment of the problem, he concluded that only a single species, <a href="Pegomya">Pegomya</a> hyoscyami (Panzer), should be recognized. The name by Panzer dates from 1809 and antedates 17 synonyms, including <a href="mixta">mixta</a>, cited by Hennig. The huge mass of contradictory data indicates that the taxon is complex. Until better and more reliable data on the status of the various segregates are available, the beet leafminer and the spinach leafminer are best treated as the same species, <a href="Pegomya hyoscyami">Pegomya hyoscyami</a> (Panzer). This insect occurs in Europe, northern Africa, <a href="Asia">Asia</a>, and North America and feeds upon plants of at least 5 families: Amaranthaceae, Aizoaceae, Caryophyllaceae, Chenopodiaceae, and Solanaceae.

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- Chillcott, J.G. 1959. The <u>Pegomyia hyoscyami</u> (spinach leafminer) complex in North America (Diptera: Muscidae). Canadian Entomol. 91:167-170.
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- Steyskal, G.C. 1970. The anatomy and taxonomy of the beet leafminer of Egypt and Cyprus, Pegomya mixta (Diptera: Anthomyiidae). Ann. Entomol. Soc. Amer. 63:300-307.
- 1/ Systematic Entomology Laboratory, IIBIII, ARS, USDA, c/o U.S. National Museum, Washington, DC 20560

U.S. Dep. Agric., Coop. Plant Pest Rep. 2(41):818, 1977







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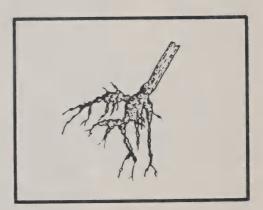
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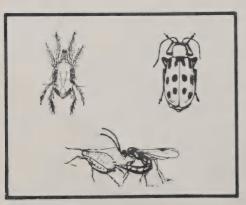
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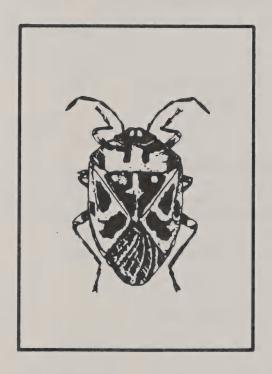


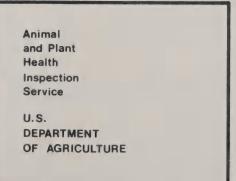


VOL. 2 NO. 42

October 21, 1977

# Cooperative PLANT PEST REPORT









This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

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#### **COOPERATIVE PLANT PEST REPORT**

#### HIGHLIGHTS

#### Current Conditions

Lettuce in southwestern area of New Mexico abandoned due to CORN EARWORM.(p. 821).

Prevalence of SOYBEAN POD AND STEM BLIGHT on soybean pods 28% or higher in northwestern parts of Illinois. (p. 822).

#### Detection

A PSYLLID in Hawaii is new for the Western Hemisphere. (p. 825).

A SCOLYTID BEETLE is new for Oklahoma. (p. 824).

For new county records see page 825.

Reports in this issue are for the week ending October 14 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

CORN EARWORM (Heliothis zea) - NEW MEXICO - Northern Dona Ana County--about  $\overline{500}$  acres of lettuce abandoned due to 30-35% head infestation. (Durkin).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

COMMON SMUT (<u>Ustilago</u> <u>maydis</u>) - ILLINOIS - Prevalence on commercial field corn (harvest maturity) by county week ending September 30: Peoria--11%, Bureau--9%, Henry--7%, Knox--16%, McDonough--13%, and Cass--12%. (Jordan).

EAR ROTS - ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis), GONATOBOTRYS ROT (Gonatobotrys zeae), Penicillium spp., FUJIKUROI ROT (Gibberella fujikuroi), and Cladosporium spp. ear rot in commercial field corn (harvest maturity) by county week ending September 30: Peoria--52%, not reported, 12%, 9%, 11%; Bureau--27%, 2%, 17%, 11%, not reported; Henry--12%, not reported, 10%, 5%, 4%; Knox--33%, 3%, 24%, 17%, not reported; McDonough--15%, not reported, 11%, 8%, 3%; and Cass--24%, 7%, 31%, 22%, 9%. (Jordan). OHIO - Most kernel rots caused by Gibberella fujikuroi, Cladosporium, and Penicillium after insect and bird injury to ear tips. Prevalence in corn (physiologic maturity) week ending October 7: Ashland--10%, Ashtabula--5%, Fairfield--5%, Knox--trace to 1% in 2 fields, Mahoning--40%, Perry--2-10% in 2 fields, and Trumbull--50%. (Hite). MICHIGAN - Prevalence/severity of ORYZAE ROT (Nigrospora oryzae) in corn ears (harvest maturity) by county: Kent--1%/trace and St. Clair--25%/33%. Prevalence/severity of Fusarium sp. ear rots in corn (harvest maturity) by county: Ionia--5%/1%, Kent--trace, and St. Joseph--trace. (Singh).

STALK ROTS - ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis), GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum), MAYDIS ROT (Diplodia maydis), and ORYZAE ROT (Nigrospora oryzae) in commercial field corn (harvest maturity) by county week ending September 30 (graminicolum and maydis not reported in first 3 counties): Peoria--11%, 4%; Bureau--28%, 7%; Henry--21%, 5%; Knox--23%, 16%, not reported, 4%; McDonough--31%, 14%, 3%, not reported; and Cass--38% roseum. (Jordan). OHIO - Prevalence of mostly Anthracnose and Gibberella or Fusarium sp. in corn (physiologic maturity unless stated otherwise) by county week ending October 7: Ashland--1%, Ashtabula--5%, Fairfield--80%, Knox--89% and 47% in 2 fields, Mahoning--25%, Perry--25% and 36% in 2 fields, and Trumbull--4% (all kernels dented). (Hite).

#### INSECTS

SOUTHWESTERN CORN BORER (<u>Diatraea</u> <u>grandiosella</u>) - TEXAS - Hale County--lodging 30% in some corn fields September 28. (Cronholm).

CARMINE SPIDER MITE (<u>Tetranychus cinnabarinus</u>) - TEXAS - New county record. Hale County--collected on field corn at Halfway, by L.D. Chandler, August 12, 1977. Determined by S.R. Thewke. Sporadic throughout field, 1-1,000 females per plant in some areas. Webbing, males, and nymphs present. (Jackman).

#### SMALL GRAINS

#### DISEASES

WHEAT LEAF RUST (<u>Puccinia recondita</u>) - KANSAS - Continued widespread. Prevalence/severity on volunteer wheat unless stated otherwise by county: Geary--100%/25%, Pottawatomie--100%/40%, Clay and Marshall--80%/25%, Cloud--trace on planted wheat (seedling), and Wabaunsee--100%/5% on planted wheat (seedling). (Sim).

OAT CROWN RUST ( $\underline{\text{Puccinia}}$   $\underline{\text{coronata}}$ ) - KANSAS - Riley and Pottawatomie Counties,  $\underline{1}$  field  $\underline{\text{each--prevalence}}$  100% in volunteer oats. (Sim).

#### **FORAGE LEGUMES**

#### DISEASES

ALFALFA RUST (<u>Uromyces striatus var. medicaginis</u>) - KANSAS - Northeastern and north-central areas-most common alfalfa disease. Prevalence on established stands of alfalfa unless stated otherwise by county: Pottawatomie--90%, Riley and Clay each--100% (seedling), Cloud and Republic--60%, and Allen--100%. (Sim).

#### SOYBEANS

#### DISEASES

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - ILLINOIS - Prevalence on stems and on pods of commercial soybeans (harvest maturity unless stated otherwise) by county week ending September 30: Peoria--52%, 29%; Bureau--85%, 32%; Henry--68%, 42% (physiologic maturity); Knox--37%, 6% (physiologic maturity); McDonough--90%, 75%; and Cass--43%, 28% (physiologic maturity). (Jordan). OHIO - Prevalence on stems and on pods of soybeans (harvest maturity) by county week ending October 7: Ashland--90%, 10%; Fairfield--99%, 15%; Knox--90%, 5% in both fields; Mahoning--99%, 5%; and Perry--99%, 10%. (Hitte). MICHIGAN - Ionia County--prevalence 30% on soybean (harvest maturity) plants. (Singh).

SOYBEAN STEM CANKER (Diaporthe phaseolorum var. caulivora) - OHIO - Prevalence/number of top pod clusters with moldy seed (harvest maturity) by county week ending October 7: Ashland-20%/top 1-6 clusters, Fairfield--25%/1-5, Knox--1%/1 and 25%/1-4 in 2 fields, Mahoning--1%/1, and Perry--35%/1-8. (Hite). MICHIGAN - Ionia County--prevalence 1% in soybeans (harvest maturity). (Singh).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity unless stated otherwise) by county week ending September 30: Peoria--32%, Bureau--73%, Henry--43% (physiologic maturity), Knox--34% (physiologic maturity), McDonough--51%, and Cass--31% (physiologic maturity). (Jordan).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity unless stated otherwise) by county week ending September 30: Peoria--32%, Bureau--47%, Henry--36% (physiologic maturity), Knox--31% (physiologic maturity), McDonough--27%, and Cass--47% (physiologic maturity). (Jordan).

SOYBEAN ANTHRACNOSE (Colletotrichum dematium var. truncata) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity unless stated otherwise) by county week ending September 30: Peoria--31%, Bureau--35%, Knox--6% (physiologic maturity), McDonough--32%, and Cass--12% (physiologic maturity). (Jordan).

SEED PURPLE STAIN (Cercospora kikuchii) - ILLINOIS - Prevalence on soybean seeds (harvest maturity unless stated otherwise) by county week ending September 30: Bureau--2%, Henry--3% (physiologic maturity), Knox--9% (physiologic maturity), McDonough--4%, and Cass--10% (physiologic maturity). (Jordan). OHIO - Ashland, Fairfield, Knox, Mahoning, and Perry Counties--prevalence 50% in soybean fields (harvest maturity) week ending October 7. (Hite).

BROWN STEM ROT (Phialophora gregata) - ILLINOIS - McDonough County--prevalence 95% in commercial soybean (harvest maturity) field week ending September 30. (Jordan).

DIFFUSA POWDERY MILDEW (<u>Microsphaera diffusa</u>) - MICHIGAN - Ionia County--prevalence 30%/severity 45% in soybeans (harvest maturity). (Singh).

SOYBEAN DOWNY MILDEW (Peronospora manshurica) - ILLINOIS - Cass County--prevalence 3% on soybean seeds (physiologic maturity) in 1 commercial field week ending September 30. (Jordan).

TOBACCO RINGSPOT VIRUS - MICHIGAN - Ionia County--prevalence 25% in soybeans (harvest maturity). (Singh).

#### COTTON

#### INSECTS

BOLLWORMS (Heliothis spp.) - TEXAS - BOLLWORM ( $\underline{H}$ .  $\underline{zea}$ ) and TOBACCO BUDWORM ( $\underline{H}$ .  $\underline{virescens}$ ) counts on cotton by county September 30: Pecos and Reeves--eggs 0-5, larvae 0-6, and damaged squares 0-16 per 50 terminals; and El Paso--eggs 10, larvae 0-3, and damaged squares 0-6 per 100 terminals. (Foster, Neeb).

#### **ORNAMENTALS**

#### DISEASES

WHITE CHRYSANTHEMUM RUST (<u>Puccinia horiana</u>) - NEW JERSEY - New county records: Somerset--Warren Township, October 7, 1977; and Morris--Parsippany, October 7. All infected chrysanthemum leaves collected and determined by L.D. DeBlois. (Weber, DeBlois). See CORRECTIONS on page 825.

#### FOREST AND SHADE TREES

#### INSECTS

FALL CANKERWORM (Alsophila pometaria) - NORTH DAKOTA - Cass County--adult flights evident at Fargo on October 10. Flights in 1976 during October 28-30. (Frye).

A SCOLYTID BEETLE (Pityophthorus scriptor) - OKLAHOMA - New State record. Major County--collected under bark of dead Rhus sp. (a sumac) at Orion, by D.C. Arnold, February 22, 1977. Determined by D.E. Bright. (Arnold).

MIMOSA WEBWORM (Homadaula anisocentra) - PENNSYLVANIA - New county record. Cambria County-larvae and pupae on honeylocust at Johnston, August 26, 1977. Collected by T.E. Wolf. Determined by T.J. Henry. (Wolf).

#### MAN AND ANIMALS

#### INSECTS

HEAD LOUSE (<u>Pediculus humanus capitis</u>) - MINNESOTA - Statewide-very heavy. Worst infestation, up to 30% of population, in some school districts. Heavier than in 1976. (Sreenivasam).

#### STORED PRODUCTS

#### INSECTS

ALMOND MOTH (Cadra cautella) - FLORIDA - Jefferson County-generally infested 20,000 pounds of watermelon seeds in storage area of principal producer in State near Monticello, October 4. First discovered in late September. Loss not yet determined, but \$2,000 needed to "clean up" watermelon seeds. (Koehler).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

OAT STEM RUST (<u>Puccinia graminis var. avenae</u>) - KANSAS - Prevalence in volunteer oats by county, 1 field each: Pottawatomie--10% and Riley--50%. (Sim).

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - Sonoma County-new site detected at Santa Rosa. Large European-type elm found infected about 1 mile from previous infected site. (Mote).

#### INSECTS

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Union County-adult emergence nearly completed. Parasitism up to 80% south of Clayton. (Staff).

SCREWWORM (Cochliomyia hominivorax) - Total of 14 cases reported from continental United States September 11-17 in Texas. (Meadows). Total of 517 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 1,171 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 98,654,500 as follows: Texas 56,296,000, New Mexico 8,595,000, and Arizona 33,763,500. (Meadows). Total of 123,783,500 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### HAWAII PEST REPORT

New Western Hemisphere Record - First adult of a PSYLLID (Leptynoptera sulfurea Crawford) found in light trap at Honolulu International Airport, Oahu, by J.W. Beardsley, September 14, 1977. Subsequently, additional specimens collected in light traps at Hickam Air Force Base. Determined by J.W. Beardsley. Known from Indonesia and Mariana and Caroline Islands; recorded host is Calophyllum inophyllum (Indian laurel). (L. Nakahara).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A PSYLLID (Leptynoptera sulfurea Crawford) - HAWAII - Oahu Island. (p. 825).

NEW STATE RECORDS

#### INSECTS

A SCOLYTID BEETLE (Pityophthorus scriptor) - OKLAHOMA - Major County. (p. 824).

NEW COUNTY RECORDS

#### DISEASES

WHITE CHRYSANTHEMUM RUST (<u>Puccinia</u> <u>horiana</u>) - NEW JERSEY - Somerset and Morris. (p. 823).

#### INSECTS

CARMINE SPIDER MITE (<u>Tetranychus</u> <u>cinnabarinus</u>) - TEXAS - Hale. (p. 822).

MIMOSA WEBWORM (<u>Homadaula anisocentra</u>) - PENNSYLVANIA - Cambria. (p. 824).

#### CORRECTIONS

CPPR 2(41):812 - WHITE CHRYSANTHEMUM RUST (Puccinia horiana) - NEW JERSEY - ... Mountainside by P.V. Weber and L.D. DeBlois ... Determined by P.V. Weber; ... (Weber).

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Pest Interceptions of Quarantine Significance at Ports of Entry

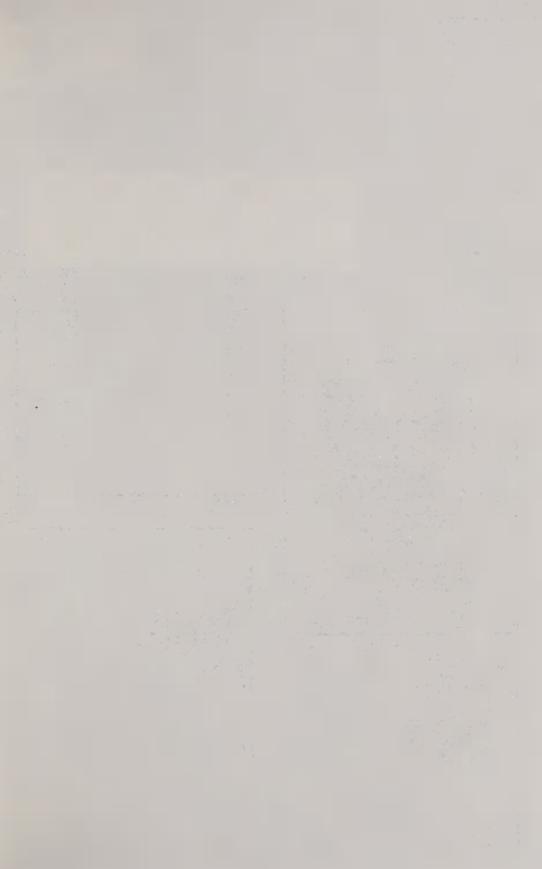
Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Puccinia aeluropotis Ricker a rust Det. F.G. Pollack	uredial	on Aeluropus repens seed	Soviet Union	Beltsville	UI
Anastrepha sp. a fruit fly Det. R.H. Foote	larval adult	with mombins from baggage	Guatemala	Los Angeles	CA
Brachycerus albidentatus Gyll. a weevil Det. D.R. Whitehead	adult	in garlic from baggage	Italy	Bangor	CA
Grapholitha funebrana (Treit.) plum fruit moth Det. D.M. Weisman	larval	in Prunus fruit from baggage	West Germany	Detroit	MI
Lobesia botrana (Schiff.) an olethreutid moth Det. D.M. Weisman	larval	in grapes from baggage	Italy	Boston	MA
Mamestra brassicae (Linnaeus) cabbage moth Det. W.D. McLellan	larval	on cabbage in ship's stores	Netherlands	New Orleans	
Taphrorychus sp. a scolytid beetle Det. D.M. Anderson	larval	in wood dunnage with machinery	West Germany	Savannah	GA
Helicella striata (Múller) a helicid snail Det. W.D. McLellan	juvenile	with dried flowers from cargo	Italy	New Orleans	AL









UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

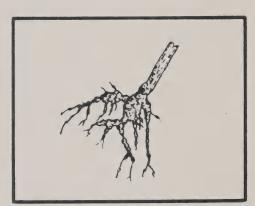
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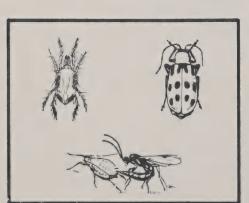
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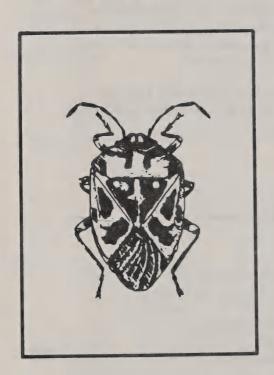






VOL. 2 NO. 43

# Cooperative PLANT PEST REPORT





DEPARTMENT
OF AGRICULTURE





This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
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Federal Building #1
Hyattsville, Maryland 20782

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# COOPERATIVE PLANT PEST REPORT

#### **HIGHLIGHTS**

# Current Conditions

FALL ARMYWORM damaged rye, oats, and barley in parts of North Carolina despite light frosts. (p. 833).

# Detection

For new county records see page 837.

First economic infestation of strain C of LIMA BEAN DOWNY MILDEW in Maryland. (p. 836).

# Special Reports

Surveys for Alfalfa Weevil Parasites during 1977, (p. 840-842).

One issue of the CPPR will be published each month for November, December, and January. This action is being taken because of reduced pest activity during this period and the need for the editorial staff to concentrate on special projects.

Reports in this issue are for the week ending October 21 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

CORN EARWORM (<u>Heliothis</u> <u>zea</u>) - KANSAS - Barber County--averages of trace to 16 per 10 sweeps of alfalfa (10-16 inches) in 3 fields. (Salsbury). Marion County--large larvae trace in heads of sunflowers (maturing) in 1 field. Butler County--averaged 0.1 per head in sorghum heads (soft dough) in 1 field. (Bell).

GREENBUG (Schizaphis graminum) - KANSAS - Stanton, Grant, and Haskell Counties--averages as heavy as 5-10 per row ft of wheat (2-6 tiller). (Shuman). Comanche County--trace in 1 of 6 fields. (Salsbury). SOUTH DAKOTA - Statewide--populations still trace in most areas. About 5,000 acres of small grains treated with foliar sprays week ending October 14. Systemic treatments applied on about 250,000 acres at planting time. (Walgenbach).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Kingfisher County--averaged 52 per 10 sweeps of alfalfa. (Arnold). KANSAS - Barber and Comanche Counties--averaged 50-300 per 10 sweeps of alfalfa (10-16 inches). (Salsbury).

# CORN, SORGHUM, SUGARCANE

# DISEASES

COMMON SMUT (<u>Ustilago maydis</u>) - ILLINOIS - Prevalence on commercial field corn (harvest maturity) by county week ending October 17: Sangamon--11%, Morgan--19%, Hancock--16%, Greene--10%, Madison--17%, Calhoun--18%, Pike--12%, Adams--14%, Shelby--16%, and Fayette--11%. (Jordan).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on commercial field corn (harvest maturity) by county week ending October 17: Morgan--12%, Hancock--5%, Pike--7%, and Fayette--4%. (Jordan).

STALK ROTS - NEBRASKA - South-central and southeastern areas:  $\frac{Fusarium}{maturity}, prevalence by county: Saline--32-46\%, Thayer--24\%, Webster--12\%, Fillmore--42\%, Clay--36\%, and Adams--24\%. (Poe).$ 

ILLINOIS - Prevalence of ROSEUM ROT (Gibberella roseum f.sp. cerealis) and ORYZAE ROT (Nigrospora oryzae) on commercial field corn (harvest maturity) by county week ending October 17: Sangamon-11%, 4%; Morgan--25%, 8%; Hancock--21%, 3%; Greene--16%, not reported; Madison--32%, 5%; Calhoun--22%, 7%; Pike--27%, 4%; Adams--34%, 8%; Shelby--14%, not reported; and Fayette--23%, not reported. GRAMINICOLUM ANTHRACNOSE (Collectrichum graminicolum) prevalence on commercial field corn (harvest maturity) by county week ending October 17: Sangamon--21%, Greene--11%, Calhoun--5%, Shelby--7%, and Fayette--4%. (Jordan). Prevalence of MAYDIS ROT (Diplodia maydis) on commercial field corn (harvest maturity) by county week ending October 17: Hancock--4%, Greene--3%, Pike--8%, and Adams--19%. (Jordan).

MINNESOTA - Prevalence of Fusarium stalk rots in commercial dent corn by county: Meeker--32%, Swift--85%, Stevens--24%, Lac qui Parle--38%, Pipestone--24%, Rock--68%, Nobles--26%, Murray--56%, Brown--79%, and Steele--68%. Activities of EUROPEAN CORN BORER (Ostrinia nubilalis) very heavy, particularly in upper half of cornstalk in many fields. Unusual for fields to have more than half of tops of stalks broken off due to this insect. (Stromberg), MICHIGAN - Prevalence of Gibberella roseum f.sp. cerealis and Nigrospora oryzae in corn by county: Newaygo--60-70%, Montcalm-50-60%. Saginaw--trace, and Tuscola--trace. (Singh).

EAR ROTS - NEBRASKA - Saline, Thayer, Webster, Fillmore, Clay, and Adams Counties-- Fusarium and/or Gibberella spp. prevalence trace to 2% in corn (full maturity). (Poe). MINNESOTA - Prevalence of primarily Fusarium spp. in commercial dent corn by county: Meeker--14%, Swift--3%, Stevens--12%, Lac qui Parle--16%, Rock--22%, Nobles--8%, Murray--18%, Brown--21%, and Steele--1%. Incidence of ear rot appears associated with insect feeding activities. Rot generally restricted to ear tips. (Stromberg).

ILLINOIS - Prevalence of ear rots due to ROSEUM ROT (Gibberella roseum f.sp. cerealis), to FUJIKUROI ROT (Gibberella fujikuroi), to Penicillium spp., and of a kernel rot due to GONATOBOTRYS ROT (Gonatobotrys zeae) in commercial field corn (harvest maturity) by county week ending October 17: Sangamon--17%, 13%, 12%, 3%; Morgan--14%, 6%, 11%, 8%; Hancock--23%, 14%, 13%, 9%; Greene-15%, 8%, 4%, 4%; Madison--4%, 9%, 29%, 6%; Calhoun--11%, 4%, 7%, not roported; Pike--9%, 6%, 10%, not reported; Adams--15%, 17%, 19%, 11%; Shelby--23%, 16%, 21%, 5%; and Fayette--all 2%, gonatobotrys not reported. Prevalence of Aspergillus ear rots in commercial field corn (harvest maturity) by county week ending October 17: Hancock--3%, Calhoun--1%, Pike--1%, and Madison--1%. (Jordon).

MICHIGAN - Prevalence/severity of ear rots due to <u>Gibberella roseum f.sp. cerealis</u>, <u>Fusarium spp.</u>, and ORYZAE ROT (<u>Nigrospora oryzae</u>) in corn by county: Newaygo--25-50%/5-7%, Montcalm--10-15%/trace, Saginaw--5-10%/10-20%, and Tuscola--30-35%/2-4%. (Singh).

# INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - SOUTH DAKOTA - Infestations 98-100% (380-600 per 100 corn plants) week ending October 7. Ear droppage and barren spindly stalks common in later planted fields. (Walgenbach). WEST VIRGINIA - Upshur County--infested 7% of cornstalks in 3 fields. Ear drop and stalk lodging slight in all fields. (Hacker).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - OHIO - New county records from corn: Champaign--on U.S. Highway 36, 0.8 mile west of Saint Paris, collected and determined by B.M. Drees, August 16; Huron--on U.S. Highway 250, 7 miles north of Fitchville, collected by M. Casey and B. Schmidt, August 18, determined by G. Szatmari-Goodman; Logan--on State Highway 706 west of Quincy near county line, collected and determined by B.M. Drees, August 16; and Miami--on State Highway 36 east of Lena near county line, collected and determined by B.M. Drees, August 16. (Drees).

#### SMALL GRAINS

# DISEASES

WHEAT LEAF RUST (<u>Puccinia</u> <u>recondita</u>) - KANSAS - Central, west-central, southwestern, and south-central areas--infected many fields of planted wheat (generally, three-leaf stage or larger). Volunteer wheat in those areas at minimum. Prevalence/severity by county: Barton--20%/trace in 1 of 2 fields, Rush--30%/trace in 1 of 2, Ness--30%/trace in 1 of 2, Lane--20%/trace and 15%/trace in 2 of 2, Scott--15%/trace and trace/trace in 2 of 2, Finney--60%/trace and 30%/trace in 2 of 2, Haskell--5%/trace in 1 of 2, Grant and Morton--trace/trace and trace/trace in 2 of 2, Stevens--10%/5% and trace/trace in 2 of 2, Seward--50%/5% and trace/trace in 2 of 2, Clark--10%/trace and trace/trace in 2 of 2, Ford--50%/trace and 50%/trace in 2 of 2, Kiowa--20%/trace and 10%/trace in 2 of 2, Pratt--10%/trace in 1 of 2, Kingman--100%/25% and trace/trace in 2 of 2, Sedgwick--trace/trace in 1 of 3, Sumner--60%/trace and 30%/5% in 2 of 4, and Harper--5%/trace, 80%/5%, and trace/trace in 3 of 3. (Sim).

NEBRASKA - Wheat leaf rust beginning to appear, prevalence/severity on winter wheat (early tiller) by county: Seward-80%/trace, Saline--15%/5%, Jefferson--15%/5% to 30%/3%, Thayer--3%/trace to 35%/15%, Nuckolls--20%/5%, Webster--20%/2%, Fillmore-none to 40%/trace, Adams--40%/1%, and Clay--60%/15% to 80%/30%. (Poe).

OAT CROWN RUST (Puccinia coronata) - KANSAS - Ellsworth County-prevalence 100%/severity on volunteer oats. (Sim).

# INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - KANSAS - Barber County-0.5-inch larvae, averaged 2 per row ft, clipped some plants above and below ground in wheat (5 tillers) field. (Salsbury). NORTH CAROLINA - Damage continued on early planted small grains. Injury totaled about 2,000 acres and ranged from 0.25-acre spots to 30 acres destroyed and replanted. Heaviest infestations appears to be in Piedmont, since planting is 2-3 weeks earlier than in Coastal Plains. (Hunt).

WHEAT STEM MAGGOT ( $\underline{\text{Meromyza}}$  americana) - KANSAS - Barber County-averaged tillers infested up to 31.2% in wheat (6 tillers) field. (Salsbury).

HESSIAN FLY (<u>Mayetiola destructor</u>) - KANSAS - Wheat tillers infested by county: Barber County--averaged up to 5.4% (6-tiller stage), Greeley and Haskell--3%, and Stanton--2%. (Shuman, Salsbury).

# TURF, PASTURES, RANGELAND

#### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - NORTH CAROLINA - Western Coastal Plains and Piedmont--damage continued despite light frost, 3rd through 5th instar larvae damaged 500+ acres of rye, oats, and barley in 10 counties. (Hunt).

#### FORAGE LEGUMES

#### DISEASES

ALFALFA RUST (<u>Uromyces striatus</u> var. <u>medicaginis</u>) - KANSAS - Central and south-central areas--most common alfalfa disease, prevalence by county: Ellsworth--40-100%, Barton and Rush--20%, Kiowa and Harvey--100%, Pratt--80%, Chase--100% (seedling) and Marion--20% (seedling). (Sim).

### INSECTS

GREEN CLOVERWORM (Plathypena scabra) - KANSAS - Harvey County-averaged 120 per 10 sweeps of alfalfa (12 inches); noticeable foliar damage. (Bell).

ALFALFA CATERPILLAR (Colias eurytheme) - NEVADA - Nye County-larvae averaged 10 per sweep on hay alfalfa in Pahrump Valley. (LeBas).

PEA APHID (Acyrthosiphon pisum) - NEVADA - Nye County--averaged 100 per sweep on hay alfalfa in Pahrump Valley. (LeBas).

#### SOYBEANS

# DISEASES

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - ILLINOIS - Prevalence on stems and on pods of commercial soybeans (harvest maturity) by county week ending October 17: Hancock--23%, 11%; Adams--42%, 15%; Madison--62%, 31%; Shelby--99%, 14%; Pike--23%, 8%; Sangamon--99%, 17%; Fayette--47%, 29%; Greene--59%, 21%; Calhoun--57%, 16%; and Morgan--63%, 15%. (Jordan). MINNESOTA - Prevalence of pycnidia on stems and on pods of commercial soybeans (harvest maturity unless stated otherwise) by county: Meeker-trace, 0 (physiologic maturity); Lac qui Parle--18%, 0; Brown--100%, 0; Traverse--100%, trace; Yellow Medicine--100%, 8%; Jackson--100%, trace; and Blue Earth--100%, trace. Pycnidia on pods generally restricted to base of plants. (Stromberg). MICHIGAN - Prevalence/severity on stems and on pods of soybeans (harvest maturity) by county: Muskegon--90-100%/85-90%, pods not given; Montcalm--60-70%/75-80%, 5-10%/10-15%; Saginaw--40-50%/70-80%, 15-20%/45-50%; and Tuscola--80-90%/60-80%, not given. (Singh).

SOYBEAN STEM CANKER (Diaporthe phaseolorum var. caulivora) - NEBRASKA - Southeastern area--only widespread soybean (harvest maturity) disease, prevalence by county: Saline--90%, Thayer--10%, and Clay--95%, with pods affected on 60% of plants in 1 field. (Poe). MICHIGAN - Muskegon County--prevalence 2% in soybeans (harvest maturity). (Singh).

BROWN STEM ROT (Phialophora gregata) - MINNESOTA - Prevalence in commercial soybeans (harvest maturity unless stated otherwise) by county: Meeker--15% (physiologic maturity), Traverse--30%, Lac qui Parle--12%, Yellow Medicine--28%, Jackson--52%, Brown--54%, and Blue Earth--28%. Vascular discoloration generally restricted to basal 15 cm of stem. (Stromberg). ILLINOIS - Prevalence in soybean plants (harvest maturity) by county, 1 commercial field each, week ending October 17: Hancock--80% and Morgan--90%. (Jordan).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county week ending October 17: Hancock--4%, Adams--39%, Madison--15%, Shelby--33%, Pike--19%, Sangamon--23%, Fayette--29%, Greene--41%, Calhoun-35%, and Morgan--12%. (Jordan).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - MINNESOTA - Meeker County--prevalence 70% on soybean stems (physiologic maturity) in 1 field. (Stromberg).

SOYBEAN TRUNCTATA ANTHRACNOSE (Colletotrichum dematium var. trunctata) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county week ending October 17: Hancock-21%, Adams--11%, and Fayette--23%. (Jordan). MICHIGAN - Prevalence/severity on stems and on pods of soybeans (harvest maturity) by county: Montcalm--45-50%/25-30%, 5-10%/40-50%; and Saginaw--30-40%/15-30%, trace. (Singh).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county week ending October 17: Hancock--18%, Adams--32%, Madison--30%, Shelby--39%, Pike--21%, Sangamon--57%, Greene--43%, Calhoun--22%, and Morgan--41%. (Jordan).

SEED PURPLE STAIN (Cercospora kikuchii) - KANSAS - Riley County-first of season in 1 soybean field. (Sim). ILLINOIS - Prevalence on commercial soybean seeds (harvest maturity) by county week ending October 17: Hancock--12%, Adams--9%, Madison--10%, Shelby--8%, Pike--17%, Sangamon--6%, Fayette--7%, Greene--8%, Calhoun--14%, and Morgan--5%. (Jordan). MICHIGAN - Prevalence/severity in soybean pods (harvest maturity) by county: Muskegon--25-50%/35-40%, Lenawee--60-70%/30-40%, and Tuscola--trace. (Singh).

TOBACCO RINGSPOT VIRUS - ILLINOIS - Shelby, Madison, Greene, Adams, and Pike Counties--prevalence in less than 1% of soybean plants (harvest maturity). (Jordan). MICHIGAN - Prevalence in soybeans (harvest maturity) by county: Muskegon--15-30%, Montcalm--5-10%, and Tuscola--20-25%. (Singh).

#### INSECTS

SOUTHERN GREEN STINK BUG (Nezara viridula) - FLORIDA - Alachua County--this species mainly and BROWN STINK BUG (Euschistus servus) 1+ per 4 ft of row (threshold) in soybeans at Alachua; 200+ acres damaged and required treatment. (Mead).

#### COTTON

#### INSECTS

COTTON LEAFPERFORATOR (<u>Bucculatrix</u> <u>thurberiella</u>) - OKLAHOMA - New county record. Logan County--larvae light on cotton 8 miles east of Crescent, October 18, 1977. Collected and determined by D.C. Arnold. (Arnold).

# BEANS AND PEAS

#### DISEASES

LIMA BEAN DOWNY MILDEW (Phytophthora phaseoli) - MARYLAND - Caroline County--strain C resulting in 30-40% yield reduction on 200+ acres of Bridgeton variety limas; 1,500 acres received 2-3 preventive sprays. First economic infestation of strain C in State. (Hellman, Pinto).

#### **DECIDUOUS FRUITS AND NUTS**

# INSECTS

PECAN WEEVIL (<u>Curculio caryae</u>) - OKLAHOMA - Rogers County--larvae 1-4 per nut in 70% of nuts in pecan orchard. (Arnold).

HICKORY SHUCKWORM (<u>Laspeyresia</u> <u>caryana</u>) - OKLAHOMA - Rogers County--heavy damage in shucks of 60% of nuts in pecan orchard. (Arnold).

#### FOREST AND SHADE TREES

# INSECTS

WALKINGSTICK (<u>Diapheromera</u> femorata) - WEST VIRGINIA - Mineral County--adult and nymphal defoliation 100% in 1,000+ acres of black locust and oak from August to October. (Miller).

# MAN AND ANIMALS

# INSECTS

HORN FLY (<u>Haematobia irritans</u>) - OKLAHOMA - Payne and Noble Counties--averaged 50 per head on cattle. (Arnold). FLORIDA - Alachua County--averaged 80 adults per head in small beef herd at Gainesville. (Mead).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

OAT STEM RUST (<u>Puccinia graminis</u> var. <u>avenae</u>) - KANSAS - Ellsworth County--prevalence 10%/severity trace on volunteer oats. (Sim).

#### INSECTS

GRASSHOPPERS - OKLAHOMA - Texas, Beaver, western Harper, and northern Ellis Counties--Melanoplus sanguinipes on rangeland and wheat margins. Heaviest in area from Texas border south of Guymon, Texas County, northeast to Turpin, Beaver County. Not found at every stop but ranged 2-10 per sq yd in wheat margins of some areas. Other species found in wheat margins in these counties:

Melanoplus differentialis, M. bivittatus, M. packardii, and Spharagemon collare. (Arnold). KANSAS - Western area-mostly Melanoplus femurrubrum decreased in wheat field borders. Averages per sq yd by county: (border infestations in wheat fields; 2-3 fields/county): Finney--2-10, Hamilton--5-15, Kearny--5-10, Grant--2-4, Haskell--2-4, Lane--0-5, Scott--0-10, Wichita--0-6, and Greeley--5-18. (Shuman).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - San Diego County-nymphs and eggs of this species and MULBERRY WHITEFLY (Tetraleurodes mori) on 10% of Eucalyptus ficifolia at San Diego. (Cook, Hill).

SCREWWORM (Cochliomyia hominivorax) - Total of 27 cases reported from continental United States September 18 to October 1 as follows: New Mexico 5 and Arizona 22. (Meadows). Total of 1,315 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 2,472 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 201,836,400 as follows: Texas 119,453,200, New Mexico 16.910,000, Arizona 65,473,200. (Meadows). Total of 372,839,800 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### HAWAII PEST REPORT

Ornamentals - ORCHID WEEVIL (Orchidophilus aterrimus) and a WEEVIL (O. peregrinator) heavily damaged orchid collections at Lihue, Koloa, and Kapaa on Kauai. Controls unsuccessful. Some small dendrobium collections nearly 100% infested with many plants damaged beyond recovery. Adults easily observed nesting in leaf axils in many cases. (Sugawa).

#### DETECTION

NEW COUNTY RECORDS

# INSECTS

COTTON LEAFPERFORATOR (Bucculatrix thurberiella) - OKLAHOMA - Logan. (p. 835).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - OHIO - Champaign, Huron, Logan, and Miami. (p. 832).

#### WEEDS

HORSENETTLE (Solanum carolinense) - CALIFORNIA - Merced County-about 200 plants found near Le Grand, by R. Aguilar, September 21, 1977. Confirmed by D. Barbe. Infestation treated. (Keffer).

#### CORRECTIONS

CPPR 2(8):73 - Helicella conspurcata, a helicellid snail should be a helicid snail.

CPPR 2(41):815 - SOUTHERN CHINCH BUG (Blissus insularis) ... add  $\underline{\text{Contra Costa}}$  County.

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Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Guignardia citricarpa Kiely citrus black spot Det. P.M. Grosser	imperfect	on oranges from baggage	South Africa	Bangor	CA
Cryptophlebia leucotreta (Meyrick) false codling moth Det. D.M. Weisman	larval pupal	in corn from baggage	Nigeria	Boston	MA
Thrips major Uzel a thrips Det. V.L. Blackburn	adult	on roses from baggage	United Kingdom	Boston	USA
Trogoderma granarium Everts Khapra beetle Det. F. Krim	larval	in wood crates of artware	India	New York	NY
Taphrorychus villifrons (Dufour) a scolytid beetle Det. D.M. Anderson	larval	in crates of steel	France	New York	ΧN
Archachatina sp. an achatinid snail net. R. Munkittrick	adult	with container vans of wire	South Africa	Houston	× E+
Otala vermiculata (Müller)  a helicid snail  net. D.M. Odermatt	adult	with baggage as food	Greece	Kennedy Airport	USA
Vaginulus occidentalis (Guilding)  a veronicellid slug  Det. R. Munkittrick	juvenile	with Yucca plants from cargo	Panama	Miami	FL

pc,29

Surveys for Alfalfa Weevil Parasites during 1977 2-5

R.J. Dysart and R.G. Bingham 1/

During 1977 we again conducted field surveys to monitor the dispersal of 5 introduced parasites of the alfalfa weevil, Hypera postica (Gyllenhal). Results of our 1976 surveys were published in the "Cooperative Plant Pest Report" 2(1-4):24-26. Our surveys during 1977 yielded 115 new county recovery records for these 5 parasite species (see Table 1). The parasites were either reared or swept at each locality. Determinations of species were made by R.J. Dysart.

Bathyplectes anurus was recovered for the first time in 46 new counties in 10 States (Rhode Island was a new State record). The parasite had been previously released in only one of these counties. Where B. anurus was present, samples of weevil larvae reared to maturity yielded the following averages of parasitism for B. anurus: Connecticut 37%, Indiana 28%, Kentucky 3%, Massachusetts 19%, New Hampshire 5%, New York 21%, Ohio 9%, Pennsylvania 18%, and Vermont 1%. Natural dispersal of B. anurus from establishment sites continues to be most rapid to the north and east, and slowest to the south and west.

Microctonus aethiopoides was found for the first time in 23 new counties in 7 States (finds in Kentucky and Maine were new State records). The parasite had been previously released in only 3 of these counties. Where M. aethiopoides was found, reared samples of weevil adults yielded the following averages of parasitism: Indiana 3%, Kentucky 4%, Maine 47%, Massachusetts 57%, New Hampshire 53%, Rhode Island 14%, and Vermont 57%.

New recoveries of <u>Bathyplectes curculionis</u> were made in 37 new counties; <u>Microctonus colesi in 3 new counties</u>; and <u>Tetrastichus incertus in 6 new counties</u>.

<sup>1/</sup> Beneficial Insects Research Laboratory, USDA, ARS, 501 S. Chapel St., Newark, Delaware 19713.

Table 1. New County Recovery Records for Alfalfa Weevil Parasites - 1977

State	County	Locality	Collection date	Parasi Specie	
CONNECTICUT	Fairfield	New Fairfield	May 25	Ва Вс	Ma Mc
INDIANA	Bartholomew Brown Clark	Burnsville Gnaw Bone Memphis	Apr. 20 Apr. 20 Apr. 20	Ba Bc Ba Ba	Ма
	Dearborn Decatur	Dillsboro Sardinia	Apr. 20 Apr. 20 Apr. 20	Ba Bc Ba Bc	
	Jefferson Jennings Martin	Madison Lovett Bramble	Apr. 20 Apr. 21	Ba Bc Ba Bc	
	Monroe Ohio	Harrodsburg Rising Sun	Apr. 21 Apr. 20 Apr. 23	Ba Bc Bc Ba Bc	
	Perry Pike Ripley	Adyeville Cato Elrod	Apr. 23 Apr. 21 Apr. 20	Ba Bc Ba	
	Scott Switzerland Vanderburgh		Apr. 20 Apr. 20 Apr. 23	Ba Bc Ba Bc Bc	Ma
KENTUCKY	Boone Bourbon Bracken	Walton Paris Brooksville	Apr. 20 Apr. 20 Apr. 21	Ba Bc Ba Bc	Ма
	Breckin- ridge Bullitt	Cloverport Shepherdsville	Apr. 18	Ba Bc Ba Bc	
	Carroll Daviess	Carrollton Masonville	Apr. 19 Apr. 18	Ba Bc	
	Fleming Gallatin Grant	Flemingsburg Warsaw Sherman	Apr. 22 Apr. 19 Apr. 20	Bc Bc Ba	
	Hancock Hardin	Lewisport Radcliff	Apr. 18 Apr. 18	Ba Ba Bc	
	Harrison Henderson Jefferson	Cynthiana Henderson Jeffersontown	Apr. 21 Apr. 17 Apr. 19	Ba Bc Bc Ba	
	Kenton Lewis Mason	Bracht Vanceburg Washington	Apr. 20 Apr. 22 Apr. 22	Ba Bc Bc Bc	
	Meade Oldham	Ekron La Grange	Apr. 18 Apr. 19	Ba Bc Ba Bc Bc	
	Robertson Scott Trimble	Kentontown Georgetown Bedford	Apr. 21 Apr. 20 Apr. 19	Ba Ba Bc	
MAINE	Cumberland York	Westbrook Alfred	May 24 May 25		Ma Ma
MASSACHUSETTS	Essex Hampden	Danvers Southwick	May 24 May 23	Ва Вс	Ma Ma
	Middlesex	Sudbury	May 24		Ma

State	County	Locality	Collection date	Parasite Species 2/
NEW HAMPSHIRE	Grafton Merrimack Rockingham Strafford Sullivan	Lebanon Concord Fpping Lee Charlestown	May 26 May 25 May 25 May 25 May 25	Ma Ma Ba Bc Ma Ti Ba Ma Ti
NEW YORK	Broome Delaware Putnam Ulster	McClure Stilesville Towners Plattekill	May 25 May 25 May 25 May 25	Ba Ba Ba Bc Ma Mc Ba
OHIO	Hamilton Meigs	Miamitown Pomeroy	Apr. 18 Apr. 22	Ba Ba
PENNSYLVANIA	Bucks Carbon Clinton Juniata Lackawanna Mifflin Montgomery	New Hope Weissport Beech Creek Port Royal Clarks Summit Lewistown Harleysville	May 2 May 24 June 3 June 2 May 24 June 2 May 24	Ba Ma Ma Bc Ma Ti Ba Ti Bc Ma Ma Mc
	Pike Susquehanna Union Wayne Wyoming	Newfoundland Lenox Foresthill Waymart Falls	May 2 May 24 June 3 May 2 May 24	Ba Bc Ma Ba Bc Ma Ba Ma Ba Bc Ba Ma Ti
RHODE ISLAND	Washington	Hopkinton	May 4	Ва
VERMONT	Addison Windsor	Bridport White River	May 26	Ba Ba Wa Wa
		Junction	May 26	Bc Ma Ti

U.S. Dep. Agric. Coop. Plant Pest Rep. 2(43):840-842, 1977

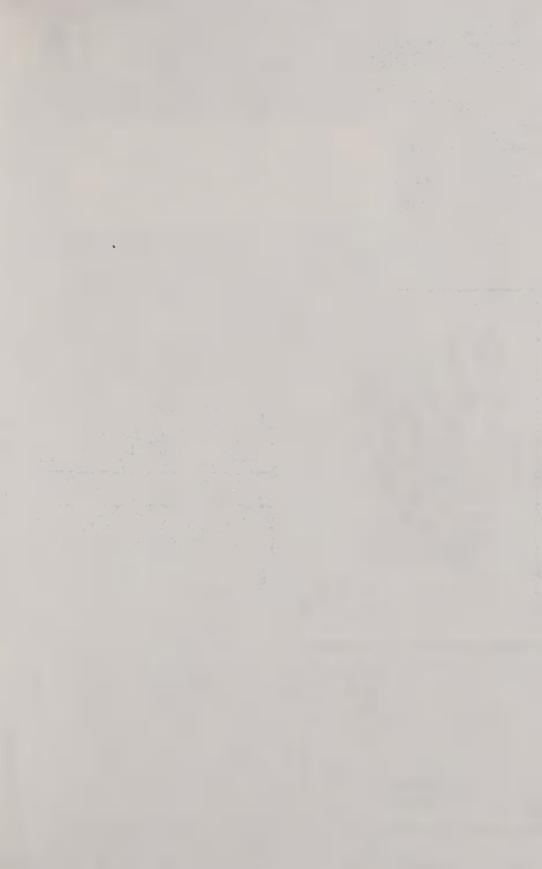
<sup>2/</sup> Ba = Bathyplectes anurus (Thomson),

 $Bc = \overline{B. \text{ curculionis (Thomson)}}$ 

 $<sup>\</sup>begin{array}{lll} \text{Ma} &= & \overline{\text{Microctonus aethiopoides}} & \text{Loan} \\ \text{Mc} &= & \overline{\text{M. colesi Drea}} \\ \text{Ti} &= & \overline{\text{Tetrastichus incertus}} & \text{(Ratzeburg)} \end{array}$ 







# UNITED STATES DEPARTMENT OF AGRICULTURE Animal and Plant Health Inspection Service

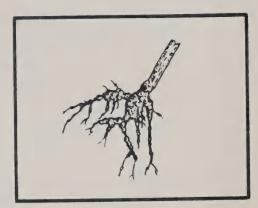
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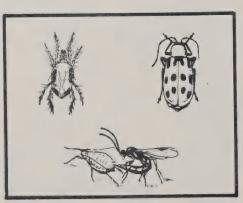
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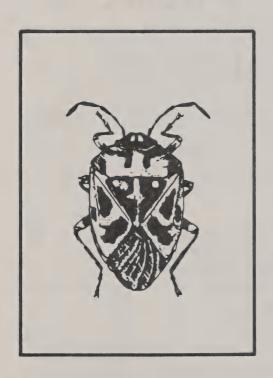






# VOL. 2 NOS. 44-47

# Cooperative PLANT PEST REPORT





Animal
and Plant
Health
Inspection
Service
U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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# COOPERATIVE PLANT PEST REPORT

#### HIGHLIGHTS

#### Current Conditions

First ARMY CUTWORM larvae this autumn in Oklahoma and Kansas. (p. 845).

GREENBUG counts of 50 or more per row ft of wheat found in parts of Oklahoma and Kansas. (p. 845).

WHEAT LEAF RUST prevalent on young small grains surveyed in parts of north-central Oklahoma, north-central Kansas, and south-central Nebraska. (p. 847).

Prevalence of SOYBEAN POD AND STEM BLIGHT on soybean pods 40% or higher in parts of eastern Michigan. (p. 850).

First PINK BOLLWORM larvae in San Joaquin Valley, California, in 7 years. (p. 855).

#### Detection



An undescribed species of MEALYBUG in Hawaii is new for the Western Hemisphere. (p. 856).

New State records include BROWN COTTON LEAFWORM in Alabama (p. 851), LOCUST LEAFMINER in Vermont (p. 853), and a LIBELLULID DRAGONFLY in Hawaii (p. 856).

For new county records, see page 857-858.

New host records for BANDEDWING WHITEFLY in Florida (p. 851) and BLACK BLISTER BEETLE in Idaho (p. 855).

#### Special Reports

Pests Not Known to Occur in the United States or of Limited Distribution. An Alydid Bug (<u>Camptopus</u> <u>lateralis</u> Germar) (p. 861-864).

Reports in this issue are for the weeks ending October 28 through November 18 unless otherwise indicated.

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# SPECIAL PESTS OF REGIONAL SIGNIFICANCE

# INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - OKLAHOMA - First of season. Custer County--lst and 2nd instar larvae averaged 3 per row ft on fall-seeded alfalfa November 5-11. (Arnold). KANSAS - Kiowa County--larvae (0.125 inch long) trace on wheat (5 tillers) November 4-10. (Salsbury).

ASTER LEAFHOPPER (Macrosteles fascifrons) - OKLAHOMA - Pontotoc County--averaged 4 per sq ft of newly planted alfalfa at Ada October 22-28. (Arnold).

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Kern, Kings, Fresno, and San Luis Obispo Counties--fall treatment completed on almost 107,000 acres in 14 days during October 10 to November 4. (Tyson).

CORN EARWORM (Heliothis zea) - CALIFORNIA - Fresno County-larvae heavy in 60-acre field of head lettuce at Firebaugh October 29 to November 4. Field not harvested; loss 100%. (Dunnegan).

GREENBUG (Schizaphis graminum) - TEXAS - Maximum counts per row ft of wheat October 21 to November 3 by county: Oldham--1, Dallam--5, Deaf Smith--5, Parmer--1, Randall--1, Potter--1, Armstrong--1, Donley--1, Hall--1, and Carson--1. (Daniels). OKLAHOMA - Counts per row ft of wheat by county: Caddo--up to 5, very light in most areas, October 22-28; Custer--up to 5,000 and Washita--5-15 for November 5-11. (Arnold). KANSAS - Counts per row ft of wheat (and average tillers per plant) by county October 31 to November 10: Pratt--0-75 (-), Reno--0-50 (4-7), Kingman--0 to trace (5-6), and Osage--6 (6). (Salsbury et al.).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Average counts per row ft of fall-seeded alfalfa by county November 5-11: Custer--500 and Washita--ranged 5-15. (Arnold). KANSAS - Counts/damage per 10 sweeps of alfalfa (and growth height) by county November 4-10: Edwards--200-5,000/some leaf shedding (7-16 inches), averaged 800, probably more earlier/defoliation serious (7-inch seedlings); Reno--0-200/not reported (8-18 inches) in 2 fields; and Pratt--20/not reported (12 inches) in 1 field. (Salsbury).

# CORN, SORGHUM, SUGARCANE

#### DISEASES

STALK ROTS - MINNESOTA - Prevalence of Fusarium spp. in commercial dent corn (harvest maturity) by county October 29 to November 4: Washington--32%, Dakota--82%, Olmsted--48%, Winona--15%, Fillmore--44%, Mower--42%, Freeborn--96% (no-till field), Faribault--56%, Martin--15%, Nobles--44%, Rock--48%, Pipestone--6%, and Sibley--54%. (Stromberg).

ILLINOIS - Prevalence of stalk rots due to GRAMINICOLUM ANTHRACNOSE (Colletotrichum graminicolum), to ORYZAE ROT (Nigrospora oryzae), to ROSEUM ROT (Gibberella roseum f.sp.

cerealis), to FUJIKUROI ROT (Gibberella fujikuroi), and to Cephalosporium spp. on commercial field corn (harvest maturity) by county October 18-20: Champaign--18%, not reported, 24%, not reported, 6%; Vermilion--27%, 8%, 21%, last 2 not reported; Iroquois--15%, not reported, 3%, 4%, not reported; Ford--8%, 3%, 18%, last 2 not reported; Livingston--5%, 4%, 19%, last 2 not reported; Will--4%, not reported, 3%, not reported, 4%; Kendall--6%, not reported, 2%, not reported, 3%; Kane--not reported, 7%, 22%, not reported, 14%; De Kalb--not reported, 6%, 20%, not reported, 5%; Ogle--17%, 3%, 11%, 5%, not reported; Carroll--18%, 9%, 15%, last 2 not reported; McHenry--not reported, 6%, 17%, not reported, 4%; and Stephenson--not reported, 5%, 14%, 3%, 6%.

Illinois - Prevalence of stalk rots due to Gibberella roseum f. sp. cerealis and due to Colletotrichum graminicolum on commercial field corn (harvest maturity) by county October 28 to November 4: Coles--16%, 23%; Cumberland--4%, 11%, and Jasper--3%, 18%. Prevalence of other stalk rots in field corn (harvest maturity) in 1 commercial field each by county: Cumberland--MAYDIS ROT (Diplodia maydis) 8% and Coles--CHARCOAL ROT (Macrophomina phaseolina) 12%. (Jordan).

MICHIGAN - Prevalence of Gibberella roseum f.sp. cerealis, Fusarium sp., and Diplodia maydis stalk rots on corn (harvest maturity) by county October 21-28: Sanilac-45-50%, Huron--15-20%, Bay--25-30%, and Clare, Lake, and Mason--trace. Prevalence/severity of G. roseum f.sp. cerealis, Fusarium sp., and Nigrospora oryzae stalk rots on corn (harvest maturity) by county November 5-11: Wexford--trace, Missaukee--trace, Ogemaw--30-35%/1-5%, Iosco--trace, Montmorency--25-30%/1-2%, Leelanau--trace, Emmet-trace, Presque Isle--60-70%/10-15%, and Antrim--40-45%/10%. (Singh).

EAR ROTS - MINNESOTA - Prevalence of mainly <u>Fusarium</u> spp. in commercial dent corn by county October 28 to November 4: Washington-24%, Dakota-28%, Olmsted-6%, Winona-5%, Fillmore-16%, Mower-86%, heavy insect damage to ears, Freeborn-45%, Faribault-16%, Martin-14%, Nobles-18%, Rock-15%, Pipestone-6%, and Sibley-12%. High levels of ear rot appeared directly associated with insect damage. (Stromberg).

ILLINOIS - Prevalence of ear rots due to Penicillium spp., to GONATOBOTRYS ROT (Gonatobotrys zeae), on kernels, to FUJIKUROI ROT (Gibberella fujikuroi), to ROSEUM ROT (Gibberella roseum f.sp. cerealis), to Cladosporium spp., and to ORYZAE ROT (Nigrospora oryzae) in commercial field corn (harvest maturity) by county October 18-20: Champaign-5%, 2%, 4%, 3%, last 2 not reported; Vermilion-2%, not reported, 3%, 2%, 2%, not reported; Iroquois-7%, 8%, 14%, 15%, 4%, not reported; Ford-6%, 9%, 15%, 12%, last 2 not reported; Livingston-3%, 10%, 18%, 13%, 11%, not reported; Will-4%, not reported, 4%, 1%, last 2 not reported; Kendall-3%, 2%, 2%, 6%, not reported, 2%; De Kalb-2%, not reported, 4%, 4%, 2%, not reported; Kane-first 2 not reported, 5%, 5%, 3%, not reported; Ogle-5%, not reported, 15%, 12%, 7%, 5%; Carroll-4%, 9%, 11%, 3%, 2%, 4%; McHenry-2%, not reported, 14%, 9%, 5%, 11%; Stephenson-14%, not reported, 17%, 2%, 3%, not reported.

Illinois - Prevalence of ear rots due to Gibberella fujikuroi, to G. roseum f.sp. cerealis, and to Penicillium spp. in commercial field corn (harvest maturity) by county October 29 to November 4: Coles--5%, 4%, 3%; Cumberland--8%, 6%, 11%; and Jasper--3%, 1%, 9%. (Jordan).

MICHIGAN - Prevalence/severity of ear rots due to Gibberella roseum f.sp. cerealis, to Nigrospora oryzae, and to Fusarium sp. In corn ears (harvest maturity) by county November 5-11:

Wexford--trace, Missaukee--5%/trace, Ogemaw--20%/1%, Iosco--1%/1%, Montmorency--trace, Antrim--95-100%/45-55%, Leelanau--trace, Emmet--10%/1%, and Presque Isle--60-70%/10-15%. (Singh).

MAIZE DWARF MOSAIC VIRUS - IOWA - New county records: Wapello-found in 1 corn field at Ottumwa, September 13, 1977; and Marion-in corn field at Pella, October 5. Both collected by D.J. Williams. Both determined under leaf dip electron microscopy by J. Hill and D.J. Williams. (Williams).

# INSECTS

CORN ROOTWORMS (Diabrotica spp.) - WISCONSIN - New county record for WESTERN CORN ROOTWORM (D. virgifera): Marinette--collected from corn at Peshtigo by H. Hauser, August 8, 1977. New county records from corn for NORTHERN CORN ROOTWORM (D. longicornis): Waupaca--at Symco by G. Smith, July 29, 1977; Outagamie--at Freedom by H. Hauser, August 9; and Oconto--at Oconto by H. Hauser, August 10. All determined by R.E. White. (Lovett).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - MISSOURI - Vernon, Cedar, and Dade Counties--light in 3 corn fields October 21-28. All fields late planted and not harvested. Infested 0-31% of plants and girdled 0-12.5%. (Munson).

#### **SMALL GRAINS**

# DISEASES

WHEAT LEAF RUST (Puccinia recondita) - OKLAHOMA - Prevalence/severity by county: Grant--100%/50% in small grain fields October 28 to November 4; Garfield, Payne, Logan, and Kingfisher--75%/20-60% in wheat November 5-11. (Jackson et al.). KANSAS - North-central area--continued to develop on seeded wheat (2-5 tillers) October 22-28. Prevalence/severity by county: Republic--10%/light, 20%/light, and 80%/moderate in 3 fields; Cloud--100%/heavy in 1; Clay--100%/moderate in 1; and Marshall--10%/light in 1. (Sim).

NEBRASKA - Wheat leaf rust seemed widespread. Prevalence/severity on wheat (early tillering) by county October 29 to November 4: Phelps--15-85%/light, Adams--5-10%/light (100%/heavy in 1 field near Prosser), Kearney--10%/light, Harlan--30%/light, Gosper and Furnas--80%/light, Dawson--mostly 25%/light (100%/moderate in 1 field in southwestern area), Red Willow--10-80%/light, Lincoln--10%/light, and Frontier--20-90%/light. (Poe). INDIANA - Prevalence severity on wheat (and growth stage) by county October 30 to November 5: Gibson--1%/trace (tillers formed) and Lawrence--1%/trace (1 shoot). (Schall).

OAT CROWN RUST (Puccinia coronata) - OKLAHOMA - Haskell County-severity 60% in field of early planted oats November 5-11. (Jackson et al.). KANSAS - Pottawatomie County--prevalence 100%/ severity 25% in 3 fields of volunteer oats. Few pustules beginning to produce teliospores. (Sim).

SPECKLED LEAF BLOTCH (Septoria tritici) - NEBRASKA - Prevalence/severity by county October 29 to November 4: Phelps--30%/light, Kearney and Harlan--10%/light, Furnas--50%/light, and Frontier--10-60%/light. (Poe).

WHEAT LEAF SPOT (Helminthosporium tritici-vulgaris) - INDIANA - Greene County--prevalence trace/severity trace on wheat (1 shoot stage) October 30 to November 5. (Schall).

### INSECTS

FALL ARMYWORM (Spodoptera frugiperda) - NORTH CAROLINA - Piedmont area--larval damage continued in scattered spots October 25-28; observation and reports decreased, only 5 counties reported economic injury. Egg laying and larval damage unlikely for rest of 1977. Risk of damage from established larvae will continue to decrease. (Hunt). MARYLAND - Statewide--1-6 per sq ft of wheat, barley, and rye 3 inches tall October 21-28, damage expected to continue 5-10 days; chemical controls erratic. Southern counties--continued to feed on small grains. (Hellman, Pinto).

HESSIAN FLY (Mayetiola destructor) - OKLAHOMA - Washington County--mostly larvae infested 25% of plants in 1 early planted wheat field. Only occasional puparia found. (Arnold). KANSAS - Percent infested wheat tillers (and average tillers per plant) by county November 3-4: Reno--0-0.5 (4-7), Ellsworth--0-0.5 (8), Russell--0-1.6 (3-5), and Saline--0-1.0 (4). (White, Salsbury).

WHEAT STEM MAGGOT (Meromyza americana) - KANSAS - Percent infested wheat tillers (and average tillers per plant) by county November 3-7: Reno--0-2.8 (4-7), Edwards--0-0.4 (6-9), Kingman--0-4.7 (5-6), and Ellsworth--0-1 (8). (Salsbury, White).

AN APHID (Rhopalosiphum padi) - OKLAHOMA - Custer County-up to 200 per row ft of wheat November 5-11. (Arnold). KANSAS - Counts per row ft of wheat (and average tillers per plant) by county October 31 to November 4: Pratt--0-300 (not given), Edwards--0-200 (6-9), Ellsworth--trace (8), Saline--trace (4), and Pottawatomie--trace (3). (Salsbury et al.).

# TURF, PASTURES, RANGELAND

#### INSECTS

GREEN JUNE BEETLE (Cotinis nitida) - ALABAMA - Cullman County-larvae badly damaged 200+ acres of pasture sod on 8 farms October 22-28. Sod mainly fescue grass and white clovers. Larvae and damage more obvious in area than in many years. (Spears).

A BILLBUG (Sphenophorus phoeniciensis) - CALIFORNIA - Fresno County--adults 10 per square yd in bluegrass lawns at Coalinga November 4-10; treatment underway. (Hawkins).

#### FORAGE LEGUMES

#### DISEASES

ALFALFA RUST (Uromyces striatus var. medicaginis) - KANSAS - Clay County--prevalence 100% in field of alfalfa (16 inches tall) October 22-28. (Sim).

#### INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Eddy County-adults (apparently overwintering populations) 1-3 per 25 sweeps of forage legumes near Artesia October 25-31. (Riddle). KANSAS - Counts on alfalfa (and growth height) by county: Pottawatomie-adults averaged 9 and 1 per 100 sweeps in 2 fields (16 and 14 inches), respectively, November 3 (Bell) and Pratt--larvae trace in field (12 inches) October 31 (Salsbury). MISSOURI - Adults per 10 sweeps of forage legumes by area: Southwestern-2-14 per 10 sweeps in 5 fields October 22-28, some egg laying; central-adults active October 30 to November 5, Howard and Boone Counties-0-8 in 3 fields, fall egg laying noted; east-central-11 for November 6-12, egg laying underway. (Munson). INDIANA - Warren County--adults 213 per 200 sweeps in alfalfa field November 2. Very heavy for first year alfalfa in prairie land and for noon. Females collected October 28 occasionally with fully formed eggs. (Shade, Meyer).

# LIGHT TRAP COLLECTIONS

CALIFORNIA - Bellota, 11/2, temp. 42-70 degrees F., BL - ARMYWORM (Pseudaletia unipuncta) 56, BEET ARMYWORM (Spodoptera exigua) 69, BLACK CUTWORM (Agrotis ipsilon) 5, VARIEGATED CUTWORM (Peridroma saucia) 1. Stockton, 10/31, temp. 43-71 degrees F., BL - Armyworm 27, beet armyworm 5, black cutworm 1, GRANULATE CUTWORM (Feltia subterranea) 23. KANSAS - Garden City, 11/4-6, BL - ARMY CUTWORM (Euxoa auxiliaris) 2, armyworm 1, CORN EARWORM (Heliothis zea) 5, variegated cutworm 1. Haviland, 10/29-11/1, BL - Army cutworm 30, armyworm 76, black cutworm 38, corn earworm 45, FALL ARMYWORM (Spodoptera frugiperda) 83, variegated cutworm 5, YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) 1. TEXAS - College Station, 10/26-11/6, BL - Armyworm 8, black cutworm 4, corn earworm 11, fall armyworm 1, TOBACCO BUDWORM (Heliothis virescens) 1, yellowstriped armyworm 2.

#### SOYBEANS

#### DISEASES

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - MINNESOTA - Prevalence of pycnidia on stems of commercial soybeans (harvest maturity) by county October 29 to November 4:

Mower-52%, Nobles-28%, and Sibley-100%. (Stromberg). ILLINOIS - Prevalence on stems and on pods of commercial soybeans (harvest maturity) by October 18-20: Champaign-49%, 8%; Vermilion-99%, 12%; Iroquois-95%, 7%; Ford-35%, 9%; Livingston-99%, 10%; Will-95%, 12%; Kendall-99%, 11%; Carroll-85%, 10%; McHenry-90%, 11%; and Stephenson-80%, 5%. Week ending November 4:

Jasper-12%, 3%, and Cumberland-99%, 11%. (Jordan).

MICHIGAN - Soybean pod and stem blight prevalence/severity on stems and on pods of soybeans (harvest maturity) by county week ending October 28: Sanilac--95-100%/80-90%, 80-95%/45-50%; Huron-85-90%/65-70%, 15-20%/trace and at a second site, 55-60%/25-30%, 10-15%/3-5%; and Bay--95-100%/60-70%, 75-80%/65-85%. November 5-10: Montmorency--95-100%/80-90%, 30-40%/65-75%. (Singh).

SOYBEAN STEM CANKER (<u>Diaporthe phaseolorum var. caulivora</u>) - MICHIGAN - Bay County--prevalence 10-20%/severity 10% in soybeans (harvest maturity) October 22-28. (Singh).

CHARCOAL ROT (Macrophomina phaseolina) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county October 18-20: Champaign-28%, Vermilion-44%, Iroquois-35%, Ford-24%, Livingston-41%, Will-29%, Kendall-53%, Kane-23%, De Kalb-15%, Ogle-36%, Carroll-18%, McHenry-16%, and Stephenson-30%. October 29 to November 4: Cumberland-90% and Jasper-11%. (Jordan).

SOYBEAN GLYCINES ANTHRACNOSE (Glomerella glycines) - ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county October 18-20: Champaign--24%, Vermilion--37%, Iroquois--22%, Ford--11%, Livingston--31%, Will--5%, Kendall--52%, Kane--33%, De Kalb--21%, Ogle--26%, Carroll--3%, and Stephenson--39%. October 29 to November 4: Cumberland--20% in 1 field. (Jordan).

SOYBEAN TRUNCATA ANTHRACNOSE - (Colletotrichum dematium var. truncata) - MINNESOTA - Mower County--prevalence 100%/ about 10% of stem tissue covered with subepidermal acervuli in commercial soybean field October 29 to November 4. (Stromberg). ILLINOIS - Prevalence on commercial soybeans (harvest maturity) by county October 18-20: Vermilion--31%, Iroquois--34%, De Kalb--18%, Ogle-27%, McHenry--42%, and Stephenson--48%. October 29 to November 4: Cumberland--20% in 1 field. (Jordan).

SEED PURPLE STAIN (Cercospora kikuchii) - ILLINOIS - Prevalence on commercial soybean seeds (harvest maturity) by county October 18-20: Champaign--2%, Vermilion--1%, Ford--6%, Livingston--1%, De Kalb--1%, Ogle--3%, McHenry--2%, and Stephenson--2%. October 29 to November 4: Cumberland--6% in 1 field. (Jordan). MICHIGAN - Bay County--prevalence 5%/severity 1% on pods of soybeans (harvest maturity) October 22-28. (Singh).

BROWN STEM ROT (Phialophora gregata) - MINNESOTA - Prevalence in commercial soybeans (harvest maturity) by county October 29 to November 4: Mower--12%, Nobles--84%, and Sibley--48%. (Stromberg).

DIFFUSA POWDERY MILDEW (Microsphaera diffusa) - MICHIGAN - Huron County--prevalence 1%/severity 50% in soybeans (harvest maturity) October 22-28. (Singh).

SOYBEAN CYST NEMATODE (Heterodera glycines) - TENNESSEE - New county records from soybeans: Cannon--1 field near Auburntown by R.E. Harrison, September 2, 1977; De Kalb--4 fields near Pisgah and Shining Rock by R.E. Harrison and P.D. Foster, September 22; Marion--1 field near Sequatchie by E. Mayberry and J. Cagle, September 21; Stewart--6 fields near Legate and Carlisle by R.A. Johnson, September 22; Sumner--3 fields near Angeltown and Portland by S. Gregory, October 14; White--1 field near Cassville by P.D. Foster and R.A. Johnson, October 31. All determined by R.E. Harrison. (Harrison et al.).

SOYBEAN MOSAIC VIRUS - ILLINOIS - Jasper County--severe in 1 commercial soybean field (harvest maturity) October 29 to November 4. Pods underdeveloped, seeds severely reduced in size and 70-75% of seeds with mottled seed coat. (Jordan).

TOBACCO RINGSPOT VIRUS - MICHIGAN - Huron County--prevalence 5% in soybeans (harvest maturity) October 22-28. (Singh).

#### INSECTS

A CERAMBYCID BEETLE (Dectes texanus texanus) - ARKANSAS - Larvae/damage on large stems of soybeans in fields by county October 22-28: Chicot--45% in 1 field/few broken 6-10 inches above soil surface; Ashley--35% in 1/no lodging; Desha--4% in 2/no lodging; Arkansas--8% in 1/no lodging; and Phillips--45% in 1/no lodging, adjacent harvested field with larvae in many stems on ground, about 20-30% stand loss and at least 5 bushels per acre yield loss. (Mayse).

BANDEDWING WHITEFLY (<u>Trialeurodes abutilonea</u>) - FLORIDA - New host record for State. Jackson County--immatures infested leaves of <u>Glycine max</u> (soybean) plants at Marianna September 26. (Bedat et al.).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - ARKANSAS - Desha County--adults very heavy in soybean field, averaged 8 per row ft, up to 20 on some of greener plants, October 22-28. (Mayse).

#### COTTON

#### INSECTS

BROWN COTTON LEAFWORM ( $\underline{Acontia}$   $\underline{dacia}$ ) - ALABAMA - New State record. Marengo County--many  $\underline{larvae}$  fed on leaves of soybeans at Faunsdale, July 5, 1977. Collected by R. Yates. Determined by D.M. Weisman. (McQueen).

#### POTATOES, TOMATOES, PEPPERS

#### INSECTS

PEPPER WEEVIL (Anthonomus eugenii) - CALIFORNIA - San Diego County--larvae and adults infested fruit in 15 acres of chili peppers at Chula Vista; about 80% of plants damaged October 29 to November 4. (Kenyon).

#### BEANS AND PEAS

#### INSECTS

BEAN APHID (Aphis fabae) - CALIFORNIA - Merced County--nymphs and adults, 5-50 per stem on 20 acres of blackeye beans at Livingston October 22-28. (Swartzell).

#### **COLE CROPS**

#### INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ALABAMA - Houston County--damage by this species, CABBAGE APHID (Brevicoryne brassicae), and IMPORTED CABBAGEWORM (Pieris rapae) light to almost economic in 3 commercial collard plantings of 45 acres October 22-28. (Stephenson).

CABBAGE WEBWORM (Hellula rogatalis) - ALABAMA - Houston County-larvae averaged 1-2 per 4 collard plants in 3 commercial plantings of 45 acres October 22-28, total damage by this and other leaf feeders approached economic levels. (Stephenson).

#### **DECIDUOUS FRUITS AND NUTS**

#### INSECTS

SAN JOSE SCALE (Quadraspidiotus perniciosus) - FLORIDA - New county record. Nassau County-immatures and adults generally infested bark of dying Pyrus sp. (pear) tree in nursery at Callahan, September 21, 1977. Collected by C.H. Webb. Determined by A.B. Hamon. (Mead).

HICKORY SHUCKWORM (Laspeyresia caryana) - OKLAHOMA - Love County-nut damage averaged 50% October 29 to November 4 in young pecan orchard bearing nuts for first time. (Arnold).

#### **ORNAMENTALS**

#### INSECTS

GREENHOUSE WHITEFLY (<u>Trialeurodes</u> vaporariorum) - FLORIDA - New host record for State. St. Lucie County--immatures severely infested leaves of <u>Licania</u> <u>michauxii</u> (gopher apple) plant in nursery at Port St. Lucie, September 16. (Campbell).

#### FOREST AND SHADE TREES

#### DISEASES

SWISS NEEDLECAST (Phaeocryptopus gaumanni) - WEST VIRGINIA - Mercer County--prevalence  $100\%/\mathrm{severity}$  90-100% on Douglas-fir in 1-acre Christmas tree plantation October 29 to November 4. Trees unsalable. (Haynes).

TINGENS BRANCH AND TRUNK CANKER (Atropellis tingens) - WEST VIRGINIA - Mercer County--prevalence 5%/severity 5% on Scotch pine in 5-acre Christmas tree plantation October 29 to November 4. (Haynes).

#### INSECTS

GREEDY SCALE (Hemiberlesia rapax) - FLORIDA - New county record: Santa Rosa--adults on stems of Juniperus silicicola (southern redcedar) in forest nursery at Munson. Collected by A.E. Graham, September 26, 1977. Determined by A.B. Hamon. (Hamon).

FALL CANKERWORM (Alsophila pometaria) - MINNESOTA - Females emerged October 29 to November 11 and actively laid eggs. Hosts included elm, hackberry, basswood, maple, and fruit trees. Females emerged about 14 days later than in 1976. (Sreenivasam).

A LYONETIID MOTH (Leucoptera laburnella) - OREGON - New county record. Lane County-heavy larval damage to leaves of 20 Laburnum vossii (golden chain trees) grown in 5-gallon containers at Lowell area nursery. Damaged leaves and pupae collected by R. Angyal, September 19, 1977. Determined by R.L. Penrose. (Penrose).

LOCUST LEAFMINER (Odontota dorsalis) - VERMONT - New State record. Chittenden County--adults heavy and leaf browning severe with extensive curling in 2-acre stand of black locust at Richmond. Collected and determined by G.R. Nielsen, September 15, 1977. Confirmed by R.E. White. (Nielsen).

AN ARMORED SCALE (Pseudaonidia duplex) - FLORIDA - New county and host records for State. Columbia County--adults and immatures infested leaves of Magnolia virginiana (sweetbay) in nursery at Lake City October  $1\overline{3}$ , 1977. Collected by C.H. Webb and A.E. Graham. Determined by A.B. Hamon. (Mead).

WALNUT SCALE (Quadraspidiotus juglansregiae) - FLORIDA - New county and host records for State. Nassau County--adults scattered on stems of Rhus copallina (shining sumac) in nursery at Hilliard, September 22, 1977. Collected by C.H. Webb. Determined by A.B. Hamon. (Mead).

AN ARMORED SCALE (<u>Pseudoparlatoria parlatorioides</u>) - FLORIDA - New host record for State. Martin County--adults moderately infested leaves of <u>Quercus</u> sp. (oak) in nursery at Rio, September 21. (Campbell).

BEECH SCALE (Cryptococcus fagisuga) - PENNSYLVANIA - New county records from American beech. Lycoming County--at McNert, September 14, 1977; and Columbia County--at Sugarloaf and Benton, September 14, 1977. Both collected and determined by B. Towers. Potter County--at Clara, September 14, 1977. Collected and determined by F. Heagy. Northampton County--at Plainfield and Washington October 18, 1977, Lehigh County--North Whitehall and Heidleberg, October 18, 1977, and Berks County--at Greenwich, October 19, 1977. Collected and determined by F. Heagy and J. Clark. (Kim).

#### MAN AND ANIMALS

#### INSECTS

HORN FLY (Haematobia irritans) - OKLAHOMA - Pawnee County-averaged 1,000 per head on cattle and Major County-200 for October 29 to November 4. (Arnold).

#### HOUSEHOLDS AND STRUCTURES

#### INSECTS

WESTERN DRYWOOD TERMITE (<u>Incisitermes minor</u>) - NEVADA - New county record. Lincoln County-dead alates collected from beneath furnace and in heat ducts of residence at Caliente by S. Rowe, October 7, 1977. Determined by R.C. Bechtel. (Bechtel).

OLD HOUSE BORER (Hylotrupes bajulus) - KENTUCKY - New county record. Fayette County-a larva collected from spruce or fir timber of 8 to 10-year-old house at Lexington, by M. Smith, September 25, 1977. Determined by R. Scheibner; Confirmed by D.M. Anderson. (Sloderbeck).

#### STORED PRODUCTS

#### INSECTS

SAWTOOTHED GRAIN BEETLE (Oryzaephilus surinamensis) - WEST VIRGINIA - Logan County--adults, larvae, and pupae infested 40,200 lbs of rice in warehouse at Logan October 22-28. (Hacker).

#### BENEFICIAL ORGANISMS & THEIR ENEMIES

#### INSECTS

AN ICHNEUMONID WASP (Bathyplectes curculionis) - KENTUCKY - New county records. Parasitized 0.4-50.9% of Hypera postica (alfalfa weevil) larvae collected by county: Casey--at Liberty by B.C. Pass, J. Parr, and K. Yeargun, April 13, 1977; Washington--at Springfield by C. Christensen, April 13; Larue--at Hodgenville by C. Christensen, April 14; Bullitt--at Shepherdsville by P. Sloderbeck, April 27; Bracken--at Brooksville, by J. Parr, May 12; and Owen--at Owenton by J. Thomas, May 17. All reared and determined by J. Parr. (Parr et al.).

AN ICHNEUMONID WASP (Bathyplectes anurus) - KENTUCKY - New county records. Parasitized 0.2-3.5% of Hypera postica (alfalfa weevil) larvae collected by county: Barren--at Glasgow by B.C. Pass, J. Parr, and K. Yeargan, April 13; Shelby--at Shelbyville by C. Christensen, April 13; Scott--at Georgetown by J. Parr and K. Yeargan, April 20; Lincoln--at Stanford by C. Christensen, April 26; Bullitt--at Shepherdsville, by P. Sloderbeck, April 27; Larue--at Hodgenville by C. Christensen, April 29; Jessamine--at Nicholasville by K. Yeargan, April 30; and Hardin--at Elizabethtown by P. Sloderbeck, May 5. All reared and determined by J. Parr. (Parr et al.).

A PUNCTUREVINE STEM WEEVIL (<u>Microlarinus</u> <u>lypriformis</u>) - KANSAS - New county record. Barber County--adult reared from larva collected by G.A. Salsbury from puncturevine near Hardtner, September 26, 1977. Determined by G.A. Salsbury and K.O. Bell. (Bell).

BLACK BLISTER BEETLE (<u>Epicauta pennsylvanica</u>) - IDAHO - Ada County--pupae averaged 2 per cubic ft in <u>Nomia melanderi</u> (alkali bee) bed near Kuna. Recorded as pest of alkali bees in State for first time October 10. Cores of original bed from out of State. (Bitner).

#### FEDERAL AND STATE PROGRAMS

#### DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) - CALIFORNIA - Still detected in infested area in American elm October 29 to November 4. Sonoma County--tree detected and confirmed at El Verano. (Krass).

#### INSECTS

JAPANESE BEETLE (<u>Popillia japonica</u>) - MARYLAND - Montgomery, Harford, and Prince Georges Counties--migrated down soil profile; larvae heaviest at 10-20 per sq ft of turf October 22-28, most averaged 8 per sq ft. (Hellman, Pinto).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Kern County--first instar larvae in cotton bolls at Buttonwillow. Total of 4 larvae found during 2 separate surveys November 4-10. First larvae found in San Joaquin Valley since 1970. (Hawkins).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - Lincoln County--adult emergence 0-80%. Areas in Mora County presently show 15% emergence with areas near Wagon Mound with no more than 5% emergence. (Banfill).

RED IMPORTED FIRE ANT (Solenopsis invicta) - ALABAMA - Lee County--5 developing mounds on lawn at Auburn, in and near playground area causing concern November 5-11. Usual fall activity statewide of active mounds being raised 2-6 inches higher to overcome damage by higher soil water table during winter. (McQueen).

SCREWWORM (Cochliomyia hominivorax) - Total of 57 cases reported from continental United States October 2-22 as follows: Texas 3, New Mexico 4, Arizona 50. (Meadows). Total of 1,424 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 3,663 cases reported in Mexico south of Barrier Zone (Williams, Smith). Number of sterile flies released this period totaled 306,851,000 as follows: Texas 208,346,000, New Mexico 17,271,000, Arizona 81,234,000. (Meadows). Total of 491,680,800 sterile flies released within Barrier of Mexico. (Williams, Smith).

#### HAWAII PEST REPORT

New Western Hemisphere Record - Heavy infestation of a MEALYBUG (Pseudococcus n. sp.) observed on Dendrobium orchids at Kohala, Hawaii Island, by R. Mau, October 22, 1976. Determined by J.W. Beardsley and confirmed by D.J. Williams as a previously undescribed species. Known from orchids in Australia. (Beardsley).

New State Record - First adult of a LIBELLULID DRAGONFLY (Orthemis ferruginea) collected at large at Ewa, Oahu, by R. Ikeno, December 4, 1976. Three more specimens collected in March and April 1977 at Manoa and Waialua, Oahu. Determined by O.S. Flint. (Beardsley).

General Vegetables - CARMINE SPIDER MITE (Tetranychus cinnabarinus) counts and damage heavy on 1 acre of bearing watermelon at Omaopio, Maui, October 29 to November 4. (Ah Sam, Sugawa).

Ornamentals - Larvae of OLEANDER HAWK MOTH (Deilephila nerii) moderate on young gardenia plants (backyard planting) at Hilo (Panaewa), Hawaii Island, October 22-28. Several plants 90% defoliated. Larvae and damage on Oahu trace to light on oleander plants along medial strips at Pearl City and Honolulu (Kalihi and Aala). (Yoshioka et al.).

Forest and Shade Trees - All stages of an ADELGID (Pineus pini) heavily infested 200+ acres of various pine species in Kula Forest Reserve (Polipoli), Maui, October 22-28. Dieback of 10 to 15-ft saplings evident. In heavy dieback areas, 7% of saplings with 1-2 ft dieback of main terminal shoots. The predator, Leucopis sp. (a chamaemyiid fly) noticeably active. (Miyahira, Ah Sam).

Snail Pest - BROWN GARDEN SNAIL (Helix aspersa) confirmed about 4-5 miles southeast of original site at Kamuela, Hawaii Island, October 24, 1977. About 3 pounds of snails of varying sizes, including eggs, collected during initial survey indicated presence for at least 2 generations. Third infestation site discovered at Kamuela. (L. Nakahara).

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A MEALYBUG (Pseudococcus n. sp.) - HAWAII - Hawaii Island. (p. 856).

NEW STATE RECORDS

#### INSECTS

BROWN COTTON LEAFWORM (Acontia dacia) - ALABAMA - Marengo County. (p. 851).

A LIBELLULID DRAGONFLY (Orthemis ferruginea) - HAWAII - Oahu Island. (p. 856).

LOCUST LEAFMINER (Odontota dorsalis) - VERMONT - Chittenden County. (p. 853).

NEW COUNTY RECORDS

#### DISEASES

MAIZE DWARF MOSAIC VIRUS - IOWA - Wapello and Marion. (p. 847).

SOYBEAN CYST NEMATODE (<u>Heterodera glycines</u>) - TENNESSEE - White, Sumner, Cannon, De Kalb, Marion, and Stewart. (p. 851).

#### INSECTS

AN ARMORED SCALE (<u>Pseudaonidia duplex</u>) - FLORIDA - Columbia. (p. 853).

BEECH SCALE (Cryptococcus fagisuga) - PENNSYLVANIA - Lycoming, Columbia, Potter, Northampton, Lehigh, and Berks. (p. 854).

GREEDY SCALE (Hemiberlesia rapax) - FLORIDA - Santa Rosa. (p. 853).

AN ICHNEUMONID WASP (<u>Bathyplectes</u> <u>anurus</u>) - KENTUCKY - Barren, Shelby, Scott, Lincoln, Bullitt, Larue, Jessamine, and Hardin. (p. 855).

AN ICHNEUMONID WASP (Bathyplectes curculionis) - KENTUCKY - Casey, Washington, Larue, Bullitt, Bracken, and Owen. (p. 854).

A LYONETIID MOTH (Leucoptera laburnella) - OREGON - Lane. (p. 853).

NORTHERN CORN ROOTWORM (<u>Diabrotica</u> <u>longicornis</u>) - WISCONSIN - Waupaca, Outagamie, and <u>Oconto.</u> (p. 847).

OLD HOUSE BORER (Hylotrupes bajulus) - KENTUCKY - Fayette. (p. 854).

A PUNCTUREVINE STEM WEEVIL (Microlarinus lypriformis) - KANSAS - Barber. (p. 855).

SAN JOSE SCALE (Quadraspidiotus perniciosus) - FLORIDA - Nassau. (p. 852).

WALNUT SCALE (Quadraspidiotus juglansregiae) - FLORIDA - Nassau. (p. 853).

WESTERN CORN ROOTWORM (<u>Diabrotica</u> <u>virgifera</u>) - WISCONSIN - Marinette. (p. 847).

WESTERN DRYWOOD TERMITE (<u>Incisitermes</u> <u>minor</u>) - NEVADA - Lincoln. (p. 854).

#### CORRECTIONS

CPPR 2(43):831, 832, 834, and 835 - All disease information from ILLINOIS should be for October  $\frac{5-7}{2}$  instead of for the week ending October 17.

# Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Aulacaspis madiunensis (Zehntner) an armored scale Det. S. Nakahara	adult	on sugarcane stalks from baggage	Philippines	Seattle	USA
Ceratitis capitata (Wiedemann)  Mediterranean fruit fly  Det. R.P. Higgins	larval	in tangerines from baggage	Brazil	Miami	I L
Conotrachelus sp. a weevil Det. R. Eads	larval	in guava fruit from baggage	Mexico	El Paso	CA
Cryptoblabes gnidiella (Milliere) a pyralid moth Det. D.M. Weisman	larval pupal	in pome- granates from baggage	Spain	San Juan	PR
Earias biplaga Walker a noctuid moth Det. D.M. Weisman	larval	in okra from baggage	Nigeria	Kennedy Airport	USA
Euderes lineicollis Wiedemann a weevil Det. D.R. Whitehead	adult larval	in Protea flowers from cargo	South Africa	Houston	USA
Heliothis sp. a noctuid moth Det. D.M. Weisman	larval	in peppers from baggage	Korea	Seattle	II
Lema gallaeciana Heyden a chrysomelid beetle Det. R.E. White	adult	with Cordyline Belgium plants from cargo	Belgium	Seattle	CA

PESTS NOT KNOWN TO OCCUR IN THE UNITED STATES
Or
Of Limited Distribution

AN ALYDID BUG

Camptopus <u>lateralis</u> Germar <u>Hemiptera</u>: <u>Alydidae</u>

CONTRIBUTED BY: A.G. Wheeler, Jr. 1/

#### ECONOMIC IMPORTANCE

Frequently placed in the family Coreidae in older literature, this alydid was first recorded as a pest in 1944 on alfalfa in the USSR. Mukhamedov (1962) discovered that nymphs need alfalfa seed to survive. Wide distribution in Europe and Asia suggests that C. lateralis could be a threat to the extensive seed growing regions of the western United States. This species was intercepted in 1921 at Philadelphia, Pennsylvania, in sphagnum and dirt in a shipment of plants from Italy.

#### DISTRIBUTION

Widely distributed throughout much of southern Europe and Asia and northern Africa; known from Afghanistan, Albania, Algeria, Austria, Bulgaria, Canary Islands, Cyprus, France (including Corsica), Germany, Greece (including Crete), Hungary, India, Iran, Iraq, Italy (including Sardinia and Sicily), Libya, Malta, western Mongolia, Morocco, Pakistan, far western People's Republic of China (Sinkiang), Portugal, Romania, Spain, Syria, Switzerland, Tunisia, Turkey, USSR, United Arab Republic, and Yugoslavia.

I/ Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg, Pennsylvania 17120.

#### HOSTS

Principally Medicago sativa (alfalfa) and recorded from Daucus carota and Chrysanthemum leucanthemum (oxeye daisy).

#### CHARACTERS

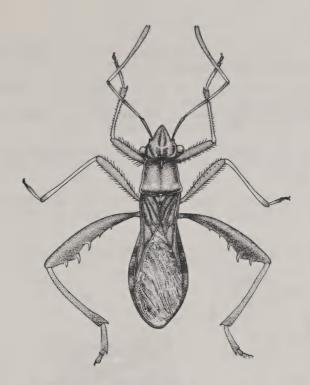
Camptopus lateralis is distinguished from North American species of Alydidae by the fine pale pubescence, stalked eyes, width across eyes equal to or greater than base of pronotum, yellow tubercle at middle of pronotal base, and curved hind tibiae.

ADULTS - Length 12.0-14.0 mm. Dull dark reddish-brown, covered with fine pale pubescence and black punctures. Head triangular, lateral edge pale between fuscous lines, fuscous stripe on either side of pale median line, broken at middle and in front of ocelli, broad fuscous stripe beginning at antennal base and extending to, but broken just before fuscous area surrounding ocelli. Fuscous triangle bordering inner margin of eyes. Eyes slightly stalked, wider than length of head. Antennal segment 1 fuscous, narrow yellow stripe on basal 3/4; 2-3 reddishyellow at middle, black at base and apex; 4 reddish-brown, paler at base; combined length longer than half of body, 1-2 subequal, 3 longer than 2, 4 longest. Rostrum reaching middle coxae or just beyond. Pronotum subquadrate, with raised posterior half, posterior angles obtusely rounded, calli impunctate, separated by yellow median carina; lateral carina yellow from anterior angle to middle, sometimes entire length, yellow tubercle at middle of base. Scutellum elongate, triangular, apex yellow, smooth. Hemelytra with fine appressed pale pubescence, membrane transparent, veins prominent, light brown. Abdomen irregularly marked with fuscous, connexvium sometimes exposed, dark spot at posterior angle of each segment. Legs clothed with fine pale pubescence mixed with longer erect setae; femora reddish-brown, front and middle femora dotted with fuscous, hind femora more fuscous dorsally with 4 prominent spines on apical half, smaller teeth behind spines 3-4; tibiae testaceous, darker at apex, hind tibiae strongly curved; tarsi reddish-brown to fuscous, base of 1st segment paler. Male claspers short, stout, nearly parallel, their tips nearly meeting.

NYMPHS - Length (fifth instar) 9.0 mm. Antlike, cinnamon colored. Head similar to that of adult, constricted behind prominent eyes. Pronotum subquadrate, anterior angles rounded, posterior angles spined. Abdomen globose, wing pads twice length of scutellum, apices darker.

#### CHARACTERISTIC DAMAGE

Adults and nymphs suck the contents from green pods of alfalfa causing the developing seed to shrivel.



 $\frac{\text{Camptopus}}{\text{Mukhamedov, page 505}} \; \frac{\text{lateralis Germar, adult $\$$ . Illustration from }}{\text{Mukhamedov, page 505}}$ 

#### BIOLOGY

Mukhamedov (1962) reported the life cycle in the Turkmenian region of the USSR. Adults overwinter and begin to appear in alfalfa fields during April when mean daytime temperatures approach  $16.0~\rm degrees~C.$ 

Females must feed on the developing seed to produce eggs. Oviposition begins in mid-May. A single female may lay up to 200 eggs singly, deposited at random on the plants. Duration of the oviposition period and maturation time of the eggs are temperature dependent. Developmental time for the eggs may be as short as 5 days at an average daytime temperature of 29.5 degrees C and as long as 26 days at 14.6 degrees C. Upon hatching, nymphs feed on the ripening pods in the middle portion of the plant. Adults are more common in the upper part of the plant.

There are two complete generations and a partial third generation. Length of the first generation required 43 days at an average daytime temperature of 25.6 degrees C, the second generation only 30 days at 29.6 degrees C, and the third more than 60 days at 22.3 degrees C. Adults seek overwintering quarters when mean daytime temperatures drop below 15.0 degrees C.

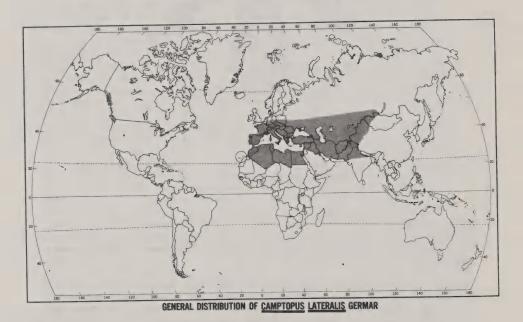
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No. 3 of Series

U.S. Dep. Agric. Coop. Plant Pest Rep. 2(44-47):861-864, 1977





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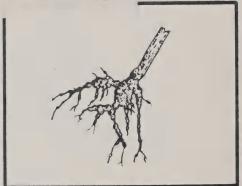
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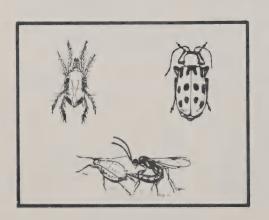
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**DECEMBER 1977** 

## Cooperative PLANT PEST

REPORT





Animal
and Plant
Health
Inspection
Service
U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes Cooperative Economic Insect Report, which was discontinued with Volume 25, Numbers 49–52, 1975.

Correspondence should be directed to:

CPPR

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#### COOPERATIVE PLANT PEST REPORT

#### HIGHLIGHTS

#### Current Conditions

GREENBUG almost or above 100 per row ft of small grains in north-central Texas, mostly southwestern and west-central Oklahoma, and south-central Kansas. (p. 867-868).

#### Detection



A genus of LYGAEID BUGS found in Hawaii is new to the Western Hemisphere. (p. 875).

New State records include MAIZE DWARF MOSAIC VIRUS in North Dakota and Michigan (p. 868), a LYGAEID BUG in Maryland (p. 871), and a GEOMETRID MOTH in Hawaii (p. 875).

For new county and island records see pages 877 and 878.

New host records in Florida for GREENHOUSE WHITEFLY (p. 871) and WOOLLY WHITEFLY (p. 873). New type of damage in Colorado for LESSER MEALWORM. (p. 874).

#### Special Reports

Geographical Distribution and Economic Importance of the Claybacked, Dingy, Dusky, and Sandhill Cutworms (p. 881-886).

New Geographical and Seasonal Distribution Records for Fortyfour Species and Subspecies of Tabanids from Virginia, Tennessee, and West Virginia (p. 887-891).

Reports in this issue are for the weeks ending November 25 through December 16 unless otherwise indicated.

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#### SPECIAL PESTS OF REGIONAL SIGNIFICANCE

#### INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - KANSAS - Harper County--0.25-inch larvae trace in 1 wheat field (9 inches, 7 tillers) near Anthony, November 18. (Bell). Comanche County--0.25-inch larvae trace on established alfalfa (18 inches). Kiowa County--0.13 to 0.25-inch larvae averaged 3 per sq ft in soil and ground litter about bases of crabgrass and broadleaf weeds in corn field margin near Haviland. (Salsbury).

CORN EARWORM (Heliothis zea) - FLORIDA - Palm Beach County--this species and FALL ARMYWORM (Spodoptera frugiperda) damaged 77% of untreated sweet corn ears at Belle Glade, December 12. H. zea caused 32% of damage. (Janes).

BEET LEAFHOPPER (Circulifer tenellus) - CALIFORNIA - Week ending November 25: Imperial County--up to 2 per 10 sweeps of Dalea emoryi (emory dalea), not known as beet leafhopper host; population scarce in area northwest of Seeley, infested acreage small and no controls needed; treatment continued at Helm, Raisin City and Coalinga, Fresno County, and Kettleman, Kings County. Week ending December 2: Fresno and Kings Counties--roadside treatment completed on 900+ acres; Kern County--treatment begun with 285 acres treated to date. Week ending December 9: Kern County--treatment continued at Bakersfield with 1,130 acres under control; Imperial County--present at Mt. Signal area of Imperial Valley as annual host plants drying; Monterey County--treatment area remained in southern Salinas Valley, counts light but winter rains could produce favorable vegetation conditions; San Joaquin County--canyons dry and counts heavy, 12 per 10 sweeps on annuals. (Tyson).

GREENBUG (Schizaphis graminum) - TEXAS - Counts per row ft of small grains by county November 21: Baylor, Fisher, and Throckmorton--0-20 each, Hardeman--fewer than 15 in young fields (mean up to 67 in older fields), and Knox--fewer than 15 in young fields (mean up to 54 in older fields). For November 28: Hardeman--1-10 in young fields (20-60 in older fields) and Fisher--1-10 in young fields. For November 30: Dallas--50-200. Counts per row ft of small grains by county December 5: Hardeman--70 in 1 older wheat field, 0-41 in other fields; and Archer, Baylor, Wichita, and Wilbarger--0-6. (Boring).

OKLAHOMA - Counts per row ft of wheat by county: Blaine, Dewey, and Woodward--16-72 in 8 fields November 25; southern Cotton County and sandy areas along North Fork Red River between Jackson and Kiowa Counties--heavy infestation, up to 200 week ending December 2, Greer--0-40, Washita and Beckham--very light to 400 (1 field in Washita averaged 5,000), Major--light to heavy, and Harper--100; southwest counties--in most wheat fields week ending December 14, Washita, Custer, and Beckham--0-300 (200-300 per row ft in about 20% of fields checked), Payne--45-125, Noble--5-40, Kay--9-90, Grant--26-55, and Garfield--13-45, some fields still treated in all of these areas; Cotton--10-200 with much spraying December 19. (Arnold).

KANSAS - Greenbug in central and south-central districts week ending November 18--populations increased on wheat during recent mild weather. Winged adults and immatures with wing pads common in some wheat fields in south-central district. Heaviest counts ranged 100-200 per row ft in Sumner, Barber, and Sedgwick Counties. Wheat in most heavily infested fields had tillering and plant growth sufficient to withstand heavier infestations than usual without significant damage. (Brooks). Averages per row ft of wheat by county November 21-22: Stafford--6-56, Barton--2-14 Pawnee--15-95, Kiowa--0-4, Franklin--2-4, Douglas--1, Wabaunsee--11, and Shawnee--0-1. (Salsbury). Counts per row ft of 3 to 8inch wheat (and number of tillers) in 2 fields by county November 28 to December 1: Allen--0 to trace (1-2), Bourbon-trace (1), Crawford--0 to trace (1), Cherokee--trace (2-3), Labette--0-2 (2-3), Neosho--trace to 2 (1-3), Wilson--3 (1-8), Montgomery--trace to 12 (1-3), Chautauqua--12-62 (2-3), Elk--7-33 (1-3), and Greenwood-2-5 (1-2). (White). Averages per row ft of wheat by county week ending December 16: Pottawatomie--4 (cattle grazing light) (Bell), Barber--0-25, and Harper--5-18 (Salsbury).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - Comanche County--averaged 1,000-3,000 per 10 sweeps of established alfalfa (7-15 inches) in 3 fields November 18. (Salsbury). Lyon County--averaged 75 per 10 sweeps of 1 alfalfa (6 inches) field. (White). Averages per row ft of seedling alfalfa (3-6 inches) by county, 1 field each: Sedgwick--45, Reno--12, Rice--20, and Barton--34. (Bell).

#### CORN, SORGHUM, SUGARCANE

#### DISEASES

MAIZE DWARF MOSAIC VIRUS - NORTH DAKOTA - New State and county records. Cass County--samples collected from Zea mays (sweet corn) at Fargo by V. Jons, R.G. Timian, and H.A. Lamey, August 5, 1977. Ransom County--collected from Setaria viridis (green bristlegrass) near Sheldon by V. Jons, August 25. Both determined by R.G. Timian. (Jons). MICHIGAN - New State and county records. Prevalence in Zea mays (corn) by county: Missaukee near Star City--30-35%, Presque Isle near Ocqueoc--10%, and Tuscola near Vassar--1%. All collected by B.P. Singh, September 9, 1977. All determined by B.P. Singh, D.T. Gordon, and L.S. Negi. (Singh).

#### SMALL GRAINS

#### INSECTS

HESSIAN FLY (Mayetiola destructor) - KANSAS - Ellsworth County-mostly small larvae infested up to 8% of tillers in wheat field (Bell) and Graham County-all puparia infested 8% of 1 field November 18 (Hilbert). Percent infested tillers in 4 to 8-inch wheat (and number of tillers) by county November 22 to December 1: Wabaunsee--5 (3) in 1 field, Wilson--0-1 (1-8) in 2, Chautauqua--0-1 (2-3) in 2, and Pawnee--0-1.5 (13-17) in 2. (White).

WHEAT STEM MAGGOT (Meromyza americana) - KANSAS - Ellsworth County--up to 3% of tillers infested November 18. (Bell). Percent of tillers infested in 4 to 8-inch wheat (and number of tillers) by county November 22 to December 1: Wabaunsee--1 (3) in 1 field, Wilson--0-1 (1-8) in 2, and Pawnee--0-1.5 (13-17) in 2. (White).

AN APHID (Rhopalosiphum padi) - TEXAS - Knox and Haskell Counties on November 21 and Hardeman, Wichita, and Wilbarger Counties on December 5-up to 5 per row ft of small grains. (Boring). OKLAHOMA - Counts per row ft of wheat by county week ending November 25: Dewey and Woodward--1-45; week ending December 2: Jackson, Greer, Kiowa, Tillman, and Cotton--20-90 in most fields, Washita--light to 250, and Harper--averaged 100; week of December 14: Washita, Custer, and Beckham--0-150, and Payne, Noble, Kay, Grant, and Garfield--1-60. Decreased in southwest counties. (Arnold).

KANSAS -  $\underline{R}$ .  $\underline{padi}$  counts per row ft of wheat by county week ending November  $\overline{18}$ :  $\underline{Barber}$ --averages up to 1,000 on wheat (8 tillers), Sedgwick--400 on wheat (10 tillers) (Salsbury); averages week of November 23: Franklin--2-4, Douglas--2, Johnson--trace, Wabaunsee--43, and Shawnee--2-4; counts on 3 to 8-inch wheat (and number of tillers) by county, 2 fields each, November 28 to December 1: Allen--2-3 (1-2), Bourbon--3-15 (1), Crawford--6-10 (1), Cherokee--5-52 (2-3), Labette--7-18 (2-3), Neosho--15 (1-3), Wilson--7-20 (1-8), Montgomery--5-51 (1-3), Chautauqua--16-39 (2-3), Elk--5-8 (1-3), and Greenwood--4-5 (1-2) (White); week ending December 16: Pottawatomie--averaged 2 in wheat (6-inch, 4-tiller) field (Bell).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - Dewey County--first of season averaged 1 per row ft in 1 wheat field November 25. (Arnold). ALABAMA - Wilcox County--1-10 (all ages) on barley, oats, and wheat in research plots at gulf coast experiment station week ending November 25. (Ball, Carden).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Denton County-200+ per row ft in I small grain field November 30. (Doggett, Turney). OKLAHOMA - Carter County--averaged 50 per row ft in 200-acre wheat field week ending December 2. Still present in many wheat fields in north-central, west-central, and southwest counties; reported in Stephens County week of December 14, light in most areas. (Arnold). KANSAS - Saline County--first of season November 18. Heaviest counts averaged 83 per row ft in wheat (4 tillers, 10 inches). (Bell). Barton County--averaged 0-25 per row ft in wheat November 23. (Salsbury).

BROWN WHEAT MITE (Petrobia <u>latens</u>) - OKLAHOMA - Jackson and Stephens Counties—first of season on wheat week of December 14. (Arnold).

#### FORAGE LEGUMES

#### INSECTS

ALFALFA WEEVIL (Hypera postica) - MISSOURI - Egg averages per sq ft of forage legumes by county: Grundy--55.3 (central counties--adults active and ranged 0-9 per 10 sweeps) November 19; Cole--235, Grundy--55.3, and Moniteau--56 in newly seeded field December 10; Cape Girardeau--53, Linn--88.7, and Douglas--620.7 December 17. (Munson). ILLINOIS - West-central Washington County--averaged 0.42 adult per sq ft in 4-sq-mile area of alfalfa November 16. (Black). KENTUCKY - Larue County--egg averages of 228. 264, 302, and 568 per sq ft in 4 different fields November 23 indicated heavy egg laying. Growers advised to take freeze down cuttings or to graze growth to remove eggs already laid and reduce egg laying sites for rest of winter. (Christensen, Leibner).

#### SOYBEANS

#### DISEASES

SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) - MISSOURI - Prevalence on stems and on pods of mature soybean plants by variety in approximate order of maturity December 9: Amsoy 71--10%, Beeson--60%, Clark 63--0%, and Cutler 71--0%. (Foudin).

BROWN STEM ROT (Phialophora gregata) - MISSOURI - Prevalence/severity in mature soybean plants by variety in approximate order of maturity in central area during November: Amsoy 71-100%/18%, Beeson-100%/19%, Wayne and Calland-80%/2%, Woodworth-90%/3%, Williams--10%/trace, Bonus--50%/2%, Clark 63-20%/4%, Cutler 71--10%/trace, Pomona--20%/trace, and Columbus-30%/trace to 2%. (Foudin).

CHARCOAL ROT (Macrophomina phaseolina) - MISSOURI - Prevalence/severity on mature soybean plants by variety in approximate order of maturity in central area during November: Amsoy 71-- 100%/18%; Beeson--100%/19%; Wayne--100%/6%; Woodworth, Williams, Bonus, Mitchell, Pomona, Columbus, and Dare--100%/3-4%; Calland--100%/4% Clark 63--100%/4%; and Cutler 71--100%/4%. (Foudin).

ROTS (Fusarium spp.) - MISSOURI - Prevalence/severity of root rots on mature soybean plants in central area by variety in order of maturity during November: Amsoy 71--100%/17%, Beeson--100%/20%, Wayne--100%/5%, Woodworth--100%/4-8%, Calland--100%/25%, Williams--100%/3%, Bonus--100%/4%, Clark 63--90%/1%, Cutler 71--100%/3%, Mitchell--100%/1%, Pomona--100%/1%, Columbus--100%/3-4%, and Dare--100%/trace. (Foudin).

ANTHRACNOSE - MISSOURI - Prevalence/severity of Colletotrichum and Glomerella spp. on mature soybean plants in central area by variety in approximate order of maturity during November: Amsoy 71-30%/trace; Beeson-20%/3-4%; Wayne--100%/5%; Woodworth, Calland, Williams, Bonus, Pomona, Columbus, and Dare--100%/4%, Clark 63--100%/5%, Cutler 71--100%/6%, and Mitchell--100%/6%. (Foudin).

#### MISCELLANEOUS FIELD CROPS

#### INSECTS

A LYGAEID BUG (Megalonotus sabulicola) - MARYLAND - New State record. Talbot County--one adult female trapped from corn on farm near Easton by R.L. Davis, July 28, 1977. Determined by E.R. Hoebeke; confirmed by J.L. Herring. This introduced Palearctic species feeds naturally on fallen seeds of Centaurea (Asteraceae). In the laboratory it will feed and lay eggs on Cenothera sp. (Onagraceae) and Helianthus annuus (sunflower) seeds. (Hoebeke).

#### **GENERAL VEGETABLES**

#### INSECTS

A LYGAEID BUG (Nysius raphanus) - CALIFORNIA - San Joaquin County--adults very heavy, 100 per leaf of curled mustard, in 1 acre at Stockton, November 25. Treatment necessary. (Croce).

#### **DECIDUOUS FRUITS AND NUTS**

#### INSECTS

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Lake and Mendocino Counties--adults heavy, up to 8-10 per beat and ranged 300-500 per 50 beats, on pear week ending December 9. Over 50 adults per 50 beats considered heavy. (Tompkins, McCartney).

WHITE PEACH SCALE (<u>Pseudaulacaspis</u> <u>pentagona</u>) - FLORIDA - New county record. Washington County--adults moderate on <u>Prunus</u> sp. (plum) plant at Chipley. Collected by K. Bedat, December 1, 1977. Determined by A.B. Hamon. (Mead).

AN ARMORED SCALE (Pseudoparlatoria parlatorioides) - FLORIDA - New county record. Columbia County--adults infested leaves of Asimina triloba (pawpaw) plant at residence at Lake City, October 23, 1977. Collected by A.E. Graham. Determined by A.B. Hamon. (Mead).

GREENHOUSE WHITEFLY (<u>Trialeurodes vaporariorum</u>) - FLORIDA - New host record for State. Alachua County--immatures generally infested leaves of few Morus rubra (red mulberry tree) in nursery at Gainesville October  $\overline{13}$ . (Lieberman).

PECAN WEEVIL (<u>Curculio caryae</u>) - OKLAHOMA - Mayes and Wagoner Counties--infested about 100% of pecans in some areas week ending December 2. (Arnold).

AN ARMORED SCALE (Chionaspis caryae) - FLORIDA - New county record. Columbia County-found on stems of Carya glabra (pignut hickory) at residence at Lake City, by A.E. Graham, October 23, 1977. Determined by A.B. Hamon. (Mead).

#### **CITRUS**

#### INSECTS

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Fresno County--gravid females up to 100 per orange fruit at Orange Cove week ending November 25. (Dunnegan).

#### OTHER TROP. & SUBTROP. FRUITS

#### INSECTS

AN ARMORED SCALE (<u>Melanaspis</u> bromeliae) - FLORIDA - New county record. De Soto County--lightly infested leaves of 20 Ananas sp. (pineapple) plants in nursery at Arcadia. Collected by  $\overline{\text{G.P.}}$  Lamb, October 18, 1977. Determined by A.B. Hamon. (Mead).

#### SMALL FRUITS

#### INSECTS

WESTERN GRAPELEAF SKELETONIZER (<u>Harrisina brillians</u>) - CALIFORNIA - Siskiyou County--3rd, 4th, and 5th instar larvae defoliated wild grapes along Klamath River near Hornbrook November 1. Larvae active much later this year than in previous years. (Horn).

A PSYLLID (<u>Trioza tripunctata</u>) - FLORIDA - New county record. Madison County--immatures and adults severely stunted and deformed leaves of <u>Rubus</u> sp. (blackberry) plants at Lee. Collected by Q.G. Anglin, November 25, 1977. Determined by F.W. Mead. (Mead).

AN ARMORED SCALE (<u>Melanaspis</u> <u>bromeliae</u>) - FLORIDA - New county record. Columbia County--adults infested stems of <u>Smilax</u> sp. at residence at Lake City. Collected by A.E. Graham, October 29, 1977. Determined by A.B. Hamon. (Mead).

#### **ORNAMENTALS**

#### INSECTS

AN ARMORED SCALE (<u>Aonidomytilus solidaginis</u>) - FLORIDA - New county record. Columbia County-adults infested leaves of <u>Solidago</u> (goldenrod) along roadside near Lake City November 25, 1977. Collected by A.E. Graham and C.H. Webb. Determined by A.B. Hamon. (Mead).

ARMORED SCALES - FLORIDA - New county records. Washington County-TEA SCALE (Fiorinia theae) on leaves of Camellia sasanqua (sasanqua camellia), Pseudaulacaspis cockerelli on leaves of Butia capitata, Gymnaspis aechmeae on leaves of Aechmea sp., and Abgrallaspis cyanophylli on stems of Cereus peruvianus (Peruvian apple cactus). All adults moderate at Chipley. Collected by K. Bedat, December 1, 1977. All determined by A.B. Hamon. (Mead).

FERN SCALE (<u>Pinnaspis aspidistrae</u>) - FLORIDA - New county record. Madison County--adults infested leaves of 20% of 25 <u>Asplenium nidus</u> (bird's nest fern) plant in nursery at Lee, by  $\overline{Q.G.}$  Anglin, November 28, 1977. Determined by A.B. Hamon. (Mead).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - FLORIDA - New host record for State. Bradford County--adults moderately infested stems and leaves of 50% of 50 Tolmiea menziesii (piggyback) plants at nursery in Keystone Heights November 21. (Lieberman).

HEMISPHERICAL SCALE (Saissetia coffeae) - FLORIDA - New county record. Washington County--adults moderate on stems and leaves of Gardenia jasminoides at Chipley. Collected by K. Bedat, December 1, 1977. Determined by A.B. Hamon. (Mead).

AN ERIOCOCCID SCALE (<u>Eriococcus</u> <u>coccineus</u>) - FLORIDA - New county record. Pinellas County--adults <u>light</u> on spines of cactus plants in nursery at St. Petersburg, October 19, 1977. Collected by C.K. Hickman. Determined by A.B. Hamon. (Mead).

AN APHID (<u>Cinara tujafilina</u>) - OKLAHOMA - Payne County--first of season. Several small colonies (5-20 per colony) on arborvitae at Stillwater week ending December 2. (Arnold).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - FLORIDA - New host record for State. Palm Beach County-immatures infested leaves of Psidium sp. (cutleaf guava) in nursery at West Palm Beach October 17, 1977. (Clinton, Bennett).

#### FOREST AND SHADE TREES

#### INSECTS

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - MISSISSIPPI - Oktibbeha County--larvae and pupae infested Virginia pine seedlings week ending November 23. About 90-100% of branch tips infested on 10 acres. Four generations usually occur in south. (Neel). Larval and pupal infestations continued week ending December 15. (Anderson). ALABAMA - Macon County--isolated area of shortleaf pine about 1.5 miles long on Interstate-85 with heavily damaged tips, 95% "burned back" 5-10 inches, now hold 1-5 pupae per tip week ending December 2. (McQueen).

A SIRICID WASP (<u>Eriotremex formosanus</u>) - FLORIDA - New county record. Flagler <u>County--adult found</u> dead with ovipositor embedded in <u>Pinus elliottii</u> (slash pine) about 10 miles south of Bunnell, by <u>T.H. Atkinson</u>, November 16, 1977. Determined by E.E. Grissell. (Mead).

GLOOMY SCALE (Melanaspis tenebricosa) - FLORIDA - New county record. Suwannee County-adults infesting stems and leaves of Acer rubrum (red maple) tree along roadside at Sandy Point. Collected by A.E. Graham, November 11, 1977. Determined by A.B. Hamon. (Mead).

A WALKINGSTICK (<u>Anisomorpha ferruginea</u>) - OKLAHOMA - New county record. Pushmataha County--mating pair collected in garage at Antlers, by R.J. Sharp, November 21, 1977. Determined by D.C. Arnold. Only second known collection from State. ( $\dot{A}$ rnold).

#### MAN AND ANIMALS

#### INSECTS

SHEEP BOT FLY (Oestrus ovis) - NORTH DAKOTA - Fargo, Cass County, and Tappen, Kidder County--1st and 2nd instars 1-6 (averaged 2) per head on 64% of 11 sheep November 25. (Meyer, Carey).

COMMON CATTLE GRUB (<u>Hypoderma lineatum</u>) - OKLAHOMA - Payne County--larvae 0-6 per head (averaged less than 1 per head) in backs of treated cattle, (Arnold).

BLACKLEGGED TICK (Ixodes scapularis) - OKLAHOMA - Mayes County-first of season. Mating pair taken on dog in Locust Grove area, November 25. (Arnold).

#### HOUSEHOLDS AND STRUCTURES

#### INSECTS

OLD HOUSE BORER (Hylotrupes bajulus) - KENTUCKY - New county record. Scott County--larvae found in pine timber of residence near Georgetown, October 25, 1977. Collected by M.J. Duncan. Determined by D.M. Anderson. (Sloderbeck).

LESSER MEALWORM (Alphitobius diaperinus) - COLORADO - Weld County--larva and adults damaged styrofoam insulation in poultry house December 1. Determined by T.J. Spilman. Third report worldwide of this species damaging styrofoam. Damage believed caused by larvae searching for pupation sites. (Hantsbarger).

WESTERN SUBTERRANEAN TERMITE (Reticulitermes hesperus) - CALIFORNIA - San Joaquin County--second flight of season occurred at Stockton week ending November 25. (Brown).

#### FEDERAL AND STATE PROGRAMS

#### INSECTS

SCREWWORM (Cochliomyia hominivorax) - Total of 111 cases reported from continental United States October 23 to November 12 as follows: Texas 1, New Mexico 1, Arizona 108, and California 1. (Meadows). Total of 967,000 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 2,890,000 cases reported in Mexico south of Barrier Zone. (Williams, Smith). Number of sterile flies released this period totaled 372,692,200 as follows: Texas 238,963,400, New Mexico 20,416,000, Arizona 100,243,000, California 13,069,800. (Meadows). Total of 537,306,200 sterile flies released within Barrier of Mexico. (Williams, Smith).

WHITEFRINGED BEETLES (<u>Graphognathus</u> spp.) - FLORIDA - New county record. Alachua County--few adults found on peanuts in experiment station field at Gainesville, by L.B. Lieberman, September 30, 1977. Determined by R.E. Woodruff. (Mead).

#### WEEDS

SPOTTED KNAPWEED (Centaurea maculosa) -- CALIFORNIA - New county record. El Dorado County--one plant found near Riverton, by D. Joley, November 5, 1977. Confirmed by D. Barbe. (Keffer).

#### HAWAII PEST REPORT

New Western Hemisphere Record - First adult of a LYGAEID BUG (Appolonius sp.) collected by N. Iha at Waimanalo, Oahu, April 12, 1976. Total of 4 more adults recovered from light trap at Barbers Point Naval Air Station in August and September 1977. Determined by J.L. Herring. Genus known from India, Sri Lanka, Philippine Islands, and southern Sudan. Food habits unknown. (Beardsley).

New State Record - A GEOMETRID MOTH (Euacidalia brownsvillea) caught at Kalihi Valley, Oahu, by F.G. Howarth between late May and mid-June 1977. Determined by F.H. Rindge. Earlier collections of single specimen each made at Lanai Hale, Lanai. in October 1976, by K. Sattler and at Kailua, Oahu, in January 1977, by J.W. Beardsley. Both specimens later determined by J.W. Beardsley. (Howarth).

General Vegetables - PEPPER WEEVIL (Anthonomus eugenii) heavy on 0.5 acre of chili pepper at Sunset Beach, Oahu, infested all examined fruits week ending December 9. (Lai, L. Nakahara). TOMATO PINWORM (Keiferia lycopersicella) continued heavy in eggplant and tomato plantings at Anahola and Kapahi during November on Kauai. (Burkhart et al.). Tomato pinworm heavy on plum tomato foliage at Mikilua, Oahu. Up to 30 larvae per leaf completely defoliated 75+% of 0.25 acre of young plants week ending December 2. (L. Nakahara). LEAFMINER FLIES (Liriomyza spp.) heavy (50-90% of leaves heavily mined) on 1 acre of tomato at Laie, Oahu, week ending November 18. (Burkhart et al.). Infestations moderate to heavy (25-50% of leaves heavily mined) on 2 acres of green onion, 0.25 acre of young pole beans, 0.25 acre of togan, 1.5 acres of yardlong beans, and 0.25 acre of tomato at Waianae Valley week ending December 2. Infestations moderate to heavy (25-50% of leaves heavily mined) on 1 acre of pole beans. 2 acres of cucumber, 0.25 acre of yardlong beans, and 5,000 sq ft of seequa at Waimanalo, Oahu, week ending December 16. (L. Nakahara). Heavy WESTERN FLOWER THRIPS (Frankliniella occidentalis) infestation (all plants; 5-15 thrips per plant) and feeding scars on 2 acres of young head lettuce at Lalamilo, Hawaii Island, week ending November 25. (Matayoshi, L. Nakahara). Heavy ONION THRIPS (Thrips tabaci) infestations (25-100 per plant) and foliar damage on 1.50 acres of maturing bulb onion at Omaopio, Maui, week ending November 25. (Miyahira). GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) infestation moderate to heavy on 0.25 acre of cucumber and 0.75 acre of tomato at Mikilua and on 1.5 acres of eggplant and 1.5 acres of bittermelon at Waianae Valley week ending December 2. (L. Nakahara). CARMINE SPIDER MITE (Tetranychus cinnabarinus) infestation moderate to heavy (5-20 individuals per sq inch) on 1.5 acres of yardlong beans, light on 1.5 acres of eggplant, 0.25 acre of corn, and 0.25 acre of winged bean in Waianae Valley week ending December 2. BROAD MITE (Polyphagotarsonemus latus) infestations heavy and damage moderate (25% of terminals deformed) on 1 acre of eggplant at Waimanalo week ending December 16. (L. Nakahara).

Fruits and Nuts - Damage by larvae of a NYMPHALID BUTTERFLY (Agraulis vanillae vanillae) light on 5 acres of young and new growth of passionflower at Kahuku, Oahu. First report of this recent immigrant in commercial planting. Large amount of frass on foliage indicated at least partial effectiveness of chemical treatments since only light larval infestations noted (less than 5% of terminals, 1-3 larvae per terminal). Adults very active in and around planting and heavy as far west along north shore of Sunset Beach. (Burkhart et al.). CHINESE ROSE BEETLE (Adoretus sinicus) foliar damage heavy to 300 acres of newly planted guava at Kilauea, Kauai, week ending December 9. (Sugawa).

Forest and Shade Trees - Heavy infestations of an ADELGID (Pineus pini) caused conspicuous terminal dieback of various backyard pine trees at Waimea, Hawaii Island. Pupal cases of the introduced predator, Leucopis nigraluna (a chamaemyiid fly) detected on infested branches week ending November 18. (Yoshioka). Larvae of a NOCTUID MOTH (Phlegetonia delatrix) damaged nearly all young terminals of Java plum growing in pastures and along roadsides at Haiku, Maui, week ending November 18. Heavy damage to new growth (50% of terminals, 75-100% defoliated) on trees at Hana. Few larvae in both localities. (Miyahira).

Beneficial Insects - A GALL FLY (Procecidochares alani) very heavy throughout Hawaii Island. Percent of terminals galled at Volcano; Honomalino; and Kaloko at 4,000 ft, 3,400 ft, and 2,600-ft elevation; 75%, 80%, 3.5%, 43%, and 97% respectively, week ending December 16. (Matayoshi, Yoshioka).

Snail Pests - Total of 1,157 specimens of BROWN GARDEN SNAIL (Helix aspera) recovered as of November 29, from latest infestation site (confirmed on October 24) at Waimea, Hawaii Island. Systematic survey conducted on about 95% of residences and pasture areas at Waimea revealed this latest infestation confined to single property. Eradication measures continued in initial infestation site and 8 live snails collected during October. (Kami, Shinbara). Dry weather over most of Kauai during November 1977 kept GIANT AFRICAN SNAIL (Achatina fulica) activity to minimum. Few winter showers towards the end of month caused snail activity in Poipu, Eleele, and Waipouli. Survey of infestations at Kekaha and Wahiawa failed to reveal any evidence of snail activity by week ending December 9. (Sugawa).

#### LIGHT TRAP COLLECTIONS

CALIFORNIA - Bellota, 12/6, 8, temp. 32-62 degrees F, BL - ARMYWORM (Pseudaletia unipuncta) 8, BEET ARMYWORM (Spodoptera exigua) 1, BLACK CUTWORM (Agrotis ipsilon) 4. FLORIDA - Gainesville, 12/8-14, BL - FALL ARMYWORM (Spodoptera frugiperda) 1, GRANULATE CUTWORM (Feltia subterranea) 6. KANSAS - Garden City, 11/10-16, BL - Black cutworm 11, VARIGATED CUTWORM (Peridroma saucia) 3. Hays, 11/8, BL - Armyworm 5, black cutworm 2, CORN EARWORM (Heliothis zea) 2, fall armyworm 1. TEXAS - College Station, 12/7-13, BL - Armyworm 5.

#### DETECTION

NEW WESTERN HEMISPHERE RECORD

#### INSECTS

A LYGAEID BUG (Appolonius sp.) - HAWAII - Oahu Island. (p. 875).

NEW STATE RECORDS

#### DISEASES

MAIZE DWARF MOSAIC VIRUS - NORTH DAKOTA - Cass County; MICHIGAN - Missaukee, Presque Isle, and Tuscola Counties. (p 868).

#### INSECTS

A GEOMETRID MOTH (<u>Euacidalia</u> <u>brownsvillea</u>) - HAWAII - Lanai Island. (875).

A LYGAEID BUG (Megalonotus sabulicola) - MARYLAND - Talbot County. (p. 871).

NEW COUNTY AND ISLAND RECORDS

#### DISEASES

MAIZE DWARF MOSAIC VIRUS - NORTH DAKOTA - Ransom; MICHIGAN - Missaukee, Presque Isle, and Tuscola. (p. 868).

#### INSECTS

AN ARMORED SCALE (<u>Abgrallaspis</u> <u>cyanophylli</u>) - FLORIDA - Washington, (p. 872).

AN ARMORED SCALE ( $\underline{Aonidomytilus}$   $\underline{solidaginis}$ ) - FLORIDA - Columbia. (p. 872).

AN ARMORED SCALE (<u>Chionaspis caryae</u>) - FLORIDA - Columbia. (p. 871).

AN ARMORED SCALE ( $\underline{\text{Gymnaspis}}$   $\underline{\text{aechmeae}}$ ) - FLORIDA - Washington. (p. 872).

AN ARMORED SCALE (Melanaspis bromeliae) - FLORIDA - De Soto and Columbia. (p. 872).

AN ARMORED SCALE (Pseudaulacaspis cockerelli) - FLORIDA - Washington. (p. 872).

AN ARMORED SCALE (<u>Pseudoparlatoria</u> <u>parlatorioides</u>) - FLORIDA - Columbia. (p. 871).

AN ERIOCOCCID SCALE (<u>Eriococcus</u> <u>coccineus</u>) - FLORIDA - Pinellas. (p. 873).

FERN SCALE (Pinnaspis aspidistrae) - FLORIDA - Madison. (p. 873).

A GEOMETRID MOTH (<u>Euacidalia</u> <u>brownsvillea</u>) - HAWAII - Oahu. (p. 875).

GLOOMY SCALE (Melanaspis tenebricosa) - FLORIDA - Suwannee. (p. 873).

HEMISPHERICAL SCALE (Saissetia coffeae) - FLORIDA - Washington. (p. 873).

OLD HOUSE BORER (<u>Hylotrupes</u> <u>bajulus</u>) - KENTUCKY - Scott. (p. 874).

A PSYLLID (Trioza tripunctata) - FLORIDA - Madison. (p. 872).

A SIRICID WASP (<u>Eriotremex formosanus</u>) - FLORIDA - Flagler. (p. 873).

TEA SCALE (Fiorinia theae) - FLORIDA - Washington. (p. 872).

A WALKINGSTICK (Anisomorpha ferruginea) - OKLAHOMA - Pushmataha. (p. 873).

WHITEFRINGED BEETLES (Graphognathus spp.) - FLORIDA - Alachua. (p. 874).

WHITE PEACH SCALE (<u>Pseudaulacaspis</u> <u>pentagona</u>) - FLORIDA - Washington. (p. 871).

#### WEEDS

SPOTTED KNAPWEED (<u>Centaurea maculosa</u>) - CALIFORNIA - El Dorado. (p. 874).

#### CORRECTIONS

CPPR 2(36):724, 731 - A NOCTUID MOTH (Leucania sp. probably insecuta (Walker)) - HAWAII - Data revised as follows: Determined as Leucania striata Leech by K. Sattler and A.H. Hayes. Known only from Japan. Other data unchanged. (Beardsley).

CPPR 2(43):835 - SOYBEAN TRUNCTATA ANTHRACNOSE (Colletotrichum dematium var. trunctata) ... should read ... SOYBEAN TRUNCATA ANTHRACNOSE (Colletotrichum dematium var. truncata.

CPPR 2(44-47):843, 855 - BLACK BLISTER BEETLE (Epicauta pennsylvanica) ... should be ... A MELOID BEETLE (Meloe niger).

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA

	Life Stage	Host	Probable Origin	Port of Entry	Desti- nation
Cerotelium fici (Butl.) Arth. a rust Det. H.T. Eng	uredial	on <u>Ficus</u> leaves from baggage	Haiti	Kennedy Airport	NY
Elsinoe australis Bitanc. & Jenkins sweet orange scab Det. H.L. Rubin	imperfect	on oranges from stores	Argentina	Miami	1
Macrophoma oleae (D.C.) Berle 8 a fungus Det. P.M. Grosser	imperfect	on olives from baggage	Jordan	Chicago	I I
Phleospora pistaciae Petr. a fungus Det. R. Hashimoto	imperfect	on Pistacia from baggage	Syria	Los Angeles	CA
Puccinia horiana P. Henn white chrysanthemum rust Det. S.N. Kunisaki	telial	on Chrysan- themum leaves from baggage	Japan	Honolulu	H
Autographa gamma (Linnaeus) silver-Y moth Det. E.L. Todd	adult	in aircraft	United Kingdom	Dover	1 1
Cryptoblabes gnidiella (Milliere) a pyralid moth Det. V.L. Blackburn	larval	in oranges from stores	Portugal	Boston	1
Dichocrocis punctiferalis Guen. a pyralid moth Det. R. Munkittrick	larval	on Pinus plants from cargo	Japan	San Francisco	CA

Desti- nation	!	니	CA	CA	CA	XL	CA	CA	X
Port of Entry	Boston	Tampa	San Diego	San Diego	Hawaii	Kennedy Airport	Anchorage	Lihue	Houston
Probable Origin	United Kingdom	Spain	Mexico	Mexico	Hawaii	Pakistan	Hong Kong	Hawaii	Italy
Host	with parsley from stores	in peas from baggage	with Monstera seeds from	in corn from baggage	on Codiaeum leaves from baggage	on mango leaves from baggage	on cargo	in baggage	on container of marble tile
Life Stage	larval	larval	larval	adult	pupae	adult	adult	adult	adult
	Euleia heraclei (Linnaeus) celery fly Det. V.L. Blackburn	Lampides boeticus (Linnaeus)  bean butterfly  net. D.M. Weisman	Metamasius sp.  a weevil Det. D.M. Anderson	Nicentrus testaceus Champion a weevil Det. D.R. Whitehead	Orchamoplatus mammaeferus a whitefly (Quaintance & Baker) net R.K. Kunis	Parlatoria crypta McKenzie an armored scale net D.M. Odermatt	Spodoptera mauritia (Boisduval) lawn armyworm Det. E.L. Todd	Achatina fulica Bowdich giant African snail	Deroceras caruanae (Pollonera) a slug Det. R. Munkittrick

Geographical Distribution and Economic Importance of the Clay-backed, Dingy, Dusky, and Sandhill Cutworms

## Roy W. Rings 1/ and Fred J. Arnold 2/

ABSTRACT. The geographical distribution of the clay-backed, dingy, dusky, and sandhill cutworms are illustrated for the contiguous United States and lower Canada. The economic importance in terms of crop damage and extent are given in general terms. Some of the more important outbreaks of cutworms are also described.

Over the past three years we have attempted to define the geographical distribution of cutworms attacking corn in the contiguous United States and Canada. This effort is one of the objectives of a multi-State research project entitled "Bionomics and Management of Soil Arthropods"  $\underline{3}$ .

In 1972, personnel of the "Cooperative Economic Insect Report" provided us with distribution maps of a number of species from the Scientific Records System. Additional records were obtained during the preparation of specific bibliographies based on a literature search of abstracting journals and pest survey reports (Rings et al. 1975, 1976). Each of the land-grant universities in all 50 States was requested to provide us with distribution records from their insect reference collections. Cooperating States shipped unidentified cutworm larvae to Wooster, Ohio, where a cutworm identification center had been established. This process yielded still other distributional data.

The purpose of this paper is to present distribution records for four of the common subterranean cutworms and to briefly mention some outbreaks. Outbreaks are defined as the sudden occurrence of exceptionally high populations of cutworms which result in significant crop losses in a given area.

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- 3/ Investigations supported in part by Environmental Protection Agency Grant No. EPA R802547 and USDA Cooperative State Research Service Grant No. 316-15-99. A cooperative research program including University of Missouri, Illinois Natural History Survey, Iowa State University, Michigan State University, University of Nebraska, New York State Agricultural Experiment Station, Ohio Agricultural Research and Development Center, Purdue University, and the University of Wisconsin.

### Clay-backed Cutworm

Clay-backed cutworm, Agrotis gladiaria (Morrison) ranges from Nova Scotia west to Utah and Arizona and from southern Quebec to Florida. It is most abundant in the north-central and eastern United States (Fig. 1).

Although this species is an infrequent pest of economic importance, local outbreaks of serious proportions have occurred in many States east of the Mississippi River. In 1887 and 1888, it was the most abundant and by far the most destructive species in Illinois and populations were nearly as abundant in 1901 (Forbes 1890, 1904). Garman (1895) described a notable outbreak in Kentucky in the spring of 1895 in which larvae dispersed from centers of infestation in such numbers that they were thought to be armyworms. Widespread damage was reported on clover, corn, tobacco, hemp, onions, and other garden crops. Many newly set strawberry beds were also destroyed and the young canes of blackberry and raspberry were severely injured. In 1924 clay-backed cutworms were reported to have caused severe damage to plants in hotbeds near South Euclid, Ohio (Gossard 1924).

In addition to host plants mentioned above, larve have also been reported to feed on or cause damage to alfalfa, aster, barley, bean, cabbage, dock, goldenrod, grasses, oats, pansy, pea, potato, sweetpotato, and tomato.

#### Dingy Cutworm

Dingy cutworm, Feltia ducens Walker (=Feltia subgothica (Haworth)), ranges from eastern Quebec westward to Vancouver Island and southward to southern Texas (Fig. 2).

This species is common and destructive nearly throughout its range. Although more frequent outbreaks have been reported on corn than on any other crop, numerous minor outbreaks have been reported on other field and garden crops. In 1955, heavy damage occurred in young corn over the central and northwest areas of Missouri. Almost simultaneously heavy outbreaks of dingy cutworms occurred generally over the western half of the State in pasture and legume crops early in the season (Thomas 1956).

In addition to plants mentioned above, this cutworm has a wide range of hosts including alfalfa, apple, bean, cabbage, clover, corn, cucumber, flax, horseradish, onion, pea, raspberry, squash, tobacco, tomato, and wheat.

#### Dusky Cutworm

Dusky cutworm, Agrotis venerabilis Walker, is confined to North America where it ranges throughout the United States and into lower Canada (Fig. 3).

A search of the literature in economic entomology revealed only a few records of damage and no outbreaks of this common species. Gibson (1915) reported that the dusky cutworm destroyed plants in vegetable gardens and in 1914 it was recorded as a pest of oats in Manitoba. Gauthier and Rioux (1944) considered the dusky cutworm as a secondary pest of tobacco in Quebec. Walkden (1950)

stated that dusky cutworms were at times abundant in cereal and forage crops in the Midwest, but no outbreaks were observed. He reported that the species was found in great numbers in pastures and that it frequently was a pest in gardens near Manhattan, Kansas. The host range of the dusky cutworm includes alfalfa, bean, burning-bush, common chickweed, corn, flax, grasses, oats, pansy, strawberry, tobacco, wheat, and white sweetclover.

#### Sandhill Cutworm

Sandhill cutworm Euxoa detersa (Walker) ranges from Nova Scotia and Quebec to Washington and south to South Carolina and Colorado (Fig. 4). Its distribution is apparently limited to areas with sandy soils known as sand barrens or "blow" sand.

The species is not of general importance in the United States, but is important locally as a pest in Illinois and Nebraska. In Ontario it has been an important pest of flue-cured tobacco and in certain areas has apparently developed a cyclodiene-resistant strain after four or more years of selection pressure (Begg 1963). In addition to corn and tobacco it has also been recorded as an injurious species on mango, melon, oats, onion, pea, potato, rape, raspberry, rye, strawberry, sweetclover, and wheat (Rings and Johnson 1976).

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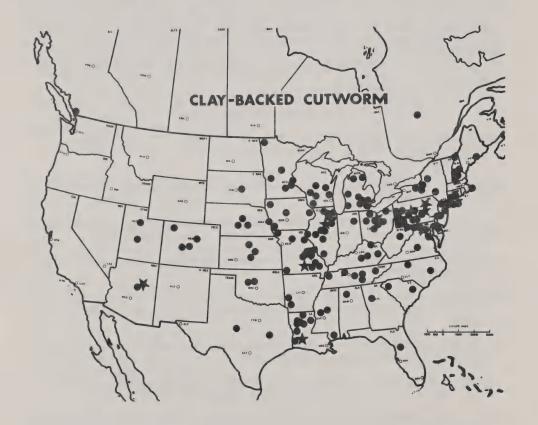


Fig. 1. Geographical distribution of the clay-backed cutworm in the contiguous United States and lower Canada. Outbreaks are indicated by stars.

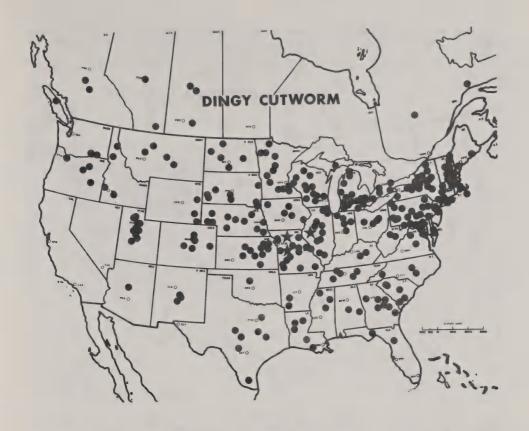


Fig. 2. Geographical distribution of the dingy cutworm in the contiguous United States and lower Canada. Outbreaks are indicated by stars.



Fig. 3. Geographical distribution of the dusky cutworm in the contiguous United States and lower Canada.

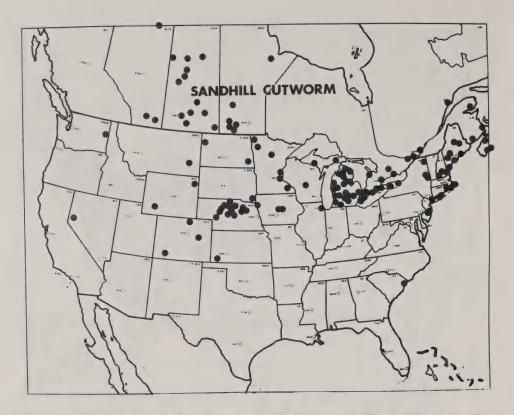


Fig. 4. Geographical distribution of the sandhill cutworm in the contiguous United States and lower Canada.

U.S. Dep. Agric. Coop. Plant Pest Rep. 2(48-52):881-886, 1977 New Geographical and Seasonal Distribution Records for Forty-four Species and Subspecies of Tabanids from Virginia, Tennessee, and West Virginia

(Diptera: Tabanidae)

William A. Allen  $\underline{1}/$  and L.L. Pechuman  $\underline{2}/$ 

Forty-four tabanid species and subspecies are listed with one new Virginia State record, Chrysops ater Macquart, and 51 new Virginia county records. The status of records from Tennessee and West Virginia is not included in this paper. The data include seasonal distribution in counties previously known to be infested. Males of Hamatabanus carolinensis (Macquart), Tabanus lineola Fabricius, Tabanus quinquevittatus Wiedemann, and Tabanus subsimilis subsimilis Bellardi are reported. Specimens taken from blacklight traps include Leucotabanus annulatus (Say), Hamatabanus carolinensis (Macquart), Tabanus aar Philip, Tabanus lineola Fabricius, Tabanus nigrovittatus Macquart, Tabanus quinquevittatus Wiedemann and Tabanus subsimilis subsimilis Bellardi. The record for Tabanus aar Philip is only the second collection from Virginia. Unusually marked specimens are mentioned under Tabanus aar Philip, Tabanus atratus nantuckensis Hine, Tabanus quinquevittatus Wiedemann and Tabanus sulcifrons Macquart. All specimens were adults and were determined by L.L. Pechuman. New county records are designated by an asterisk (\*). Independent cities also have county designations to preserve geographic continuity. References to publications listing previous records of tabanid distribution in Virginia are listed.

Chrysops ater Macquart. One specimen from Cave Mountain Lake, Rockbridge County, SWB, May 4, 1975. This is a new State record.

Chrysops atlanticus Pechuman. Mathews County\*, K.A. Langeland, September 5, 1976; and Back Bay, Independent City of Virginia Beach, Princess Anne County, SWB, August 30, 1975.

Chrysops beameri Brennan. Fluvanna County\*, WAA, August 11, 1976; and Montgomery County, WAA, August 26, 1976.

Chrysops callidus Osten Sacken. Caroline County\*, WAA, July 1,

Chrysops calvus Pechuman and Teskey. Cranberry Glades, Pocahontas County, West Virginia, SWB, June 21, 1975.

Chrysops celatus Pechuman. Caroline County, WAA, July 1, 1976; Essex County\*, WAA, July 1, 1976; and Sussex County, WAA, July 13, 1976.

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- Chrysops cincticornis Walker. Cranberry Glades, Pocahontas County, West Virginia, SWB, June 21, 1975.
- Chrysops cuclux Whitney, Cranberry Glades, Pocahontas County, West Virginia, SWB, June 21, 1975.
- Chrysops dacne Philip. Caroline County\*, WAA, July 1, 1976.
- Chrysops flavidus Wiedemann. Caroline County\*, WAA, July 1, 1976 and Spotsylvania County\*, WAA, July 1, 1976.
- Chrysops geminatus geminatus Wiedemann. Montgomery County, E.L. Allen, August 29, 1976.
- Chrysops indus Osten Sacken. Cranberry Glades, Pocahontas County, West Virginia, SWB, June 21, 1976.
- Chrysops macquarti Philip. Pedlar River, Amherst County\*, WAA, June 30, 1976; Bedford County\*, WAA, July 13, 1976; Dismal Creek, Bland County\*, WAA, September 9, 1976; Caroline County, WAA, July 1, 1976; Montgomery County, SWB, June 15, 1976; Orange County\*, WAA, July 1, 1976; and Spotsylvania County\*, WAA, July 1, 1976.
- Chrysops montanus Osten Sacken. Spotsylvania County\*, WAA, July 1, 1976.
- Chrysops niger Macquart. Montgomery County, M.W. Allen, May 23, 1976, and R.L. Pienkowski, May 27 and 31, 1976.
- Chrysops obsoletus Wiedemann. Caroline County\*, WAA, July 1, 1976; Essex County, WAA, July 1, 1976; and Mathews County\*, WAA, August 3, 1976.
- Chrysops reicherti Fairchild. Caroline County\*, WAA, July 1, 1976; Southampton County\*, WAA, August 3, 1976; and Sussex County\*, WAA, July 13, 1976.
- Chrysops shermani Hine. Two specimens from Cranberry Glades, Pocahontas County, West Virginia, SWB, June 21, 1975.
- Chrysops univittatus Macquart. Caroline County\*, WAA, July 1, 1976; and Spotsylvania County, WAA, July 1, 1976.
- Chrysops upsilon Philip. Southampton County\*, WAA, August 3, 1976; and Sussex County\*, WAA, July 13, 1976.
- Chrysops vittatus vittatus Wiedemann. Pedlar River, Amherst
  County\*, WAA, June 30, T976; Appomattox County\*, WAA, July 13,
  1976; Bedford County\*, WAA, July 13, 1976; Caroline County,
  WAA, July 1, 1976; Dinwiddie County, WAA, August 2, 1976;
  Essex County\*, WAA, July 1 and August 5, 1976; Fluvanna
  County\*, WAA, August 11, 1976; Lancaster County\*, WAA, August
  6, 1976; Mathews County\*, WAA, August 3, 1976; Middlesex
  County\*, WAA, August 5, 1976; Nottoway County\*, WAA, August 2,
  1976; Orange County, WAA, July 1, 1976; Prince Edward County\*,
  WAA, July 13, 1976; Prince George County, WAA, July 13 and
  August 3, 1976; Southampton County, WAA, August 3, 1976;
  Spotsylvania County\*, WAA, July 1, 1976; and Sussex County,
  WAA, July 13, 1976.

- Chrysops vittatus floridanus Johnson. Southampton County\*, WAA, August 3, 1976.
- Diachlorus ferrugatus (Fabricius). Independent City of Suffolk, Nansemond County\*, SWB, August 29, 1975.
- Leucotabanus annulatus (Say). Mathews County\*, WAA, August 3, 1976; Oceana, Independent City of Virginia Beach, Princess Anne County, WAA, July 27, 1976 3/; and Portsmouth, Norfolk County, WAA, July 30, 1976 3/.
- Hamatabanus carolinensis (Macquart). Oceana, Independent City of Virginia Beach, Princess Anne County, WAA, on May 11, on June 16, 23, and 29, and on July 21 and 27, 1976 3/. The two specimens taken June 23, 1976, and the single specimen taken on June 29, 1976, were males.
- Hybomitra lasiophthalma (Macquart). Montgomery County, R.L. Pienkowski, May 31, 1976.
- Tabanus aar Philip. Oceana, Independent City of Virginia Beach,
  Princess Anne County\*, WAA, July 27, 1976 3/. The specimens
  were darker than usual.
- Tabanus atratus nantuckensis Hine. Independent City of Virginia
  Beach, Princess Anne County\*, W.I. Knausenberger, September 19,
  1975. This specimen had the wings of Tabanus atratus
  nantuckensis Hine and the orange thoracic hairs of Tabanus
  atratus fulvopilosus Johnson.
- Tabanus calens Linnaeus. Craig County, SWB, September 19, 1973; and Montgomery County, BCK, September 15, 1976.
- Tabanus fulvulus Wiedemann. Middlesex County, JER, July 8, 1976.
- Tabanus gladiator Stone. Isle of Wight County, SWB, August 28,
- Tabanus lineola Fabricius. Salt marsh form: James City County\*, WAA, September 3, 1975 3/; and a male from Oceana, Independent City of Virginia Beach, Princess Anne County, WAA, September 1, 1976. Melanistic form: Prince George County\*, WAA, July 13, 1976; and Spotsylvania County\*, WAA, July 1, 1976.
- Tabanus melanocerus Wiedemann. Lancaster County, WAA, August 6, 1976; and Middlesex County, JER, July 8, 1976.
- Tabanus molestus molestus Say. Montgomery County\*, SWB, June 15, 1975; and Independent City of Salem, Roanoke County, SWB, June 23, 1973, and June 22, 1974.
- Tabanus nigrescens Palisot de Beauvois. Lancaster County\*, WAA, August 6, 1976; Middlesex County\*, WAA, August 5, 1976; Montgomery County, SWB, June 27, 1975.
- Tabanus nigrovittatus Macquart. Essex County\*, WAA, July 1, 1976; Middlesex County\*, JER, July 8, 1976; and Independent City of Portsmouth, Norfolk County, WAA, July 9, 1976 3/.
- 3/ Collected in a 15-watt fluorescent blacklight trap.

Tabanus petiolatus Hine. Caroline County\*, WAA, July 1, 1976; and Dismal Swamp, Independent City of Suffolk, Nansemond County, SWB, September 29, 1975.

Tabanus pumilus Macquart. Essex County, WAA, July 1, 1976.

Tabanus quinquevittatus Wiedemann. Caroline County\*, WAA, July 1, 1976; Montgomery County, P.W. Larkins, August 1, 1976; Independent City of Suffolk, Nansemond County, SWB, August 30, 1975; a male from Oceana, Independent City of Virginia Beach, Princess Anne County\*, WAA, September 1, 1976 3/; Spotsylvania County\*, WAA, July 1, 1976. The specimen from the Independent City of Suffolk exhibited a combination of characters from T. quinquevittatus Wiedemann, T. nigrovittatus Macquart, and T. mularis Stone but its antennae were unlike any of the species mentioned above. It is presumed to be an aberrant form.

Tabanus sackeni Fairchild. Montgomery County, WAA, September 7, 1976; and Dragons Tooth Mountain, Roanoke County\*, SWB, September 21, 1975.

Tabanus sparus probably milleri Whitney. Orange County, WAA,

July 1, 1976; and Spotsylvania County\*, WAA, July 1, 1976.

Due to the poor condition of the specimens, positive subspecific identification was impossible. However the typical form is not known to occur in Virginia.

Tabanus subsimilis subsimilis Bellardi. Oceana, Independent City of Virginia Beach, Princess Anne County, WAA, July 6, September 15, and October 12, 1976 3/. Specimens collected on September 15 and October 12 were males.

Tabanus sulcifrons Macquart. Montgomery County, WAA, September 19, 1976, and BCK, September 23, 1976; and Shenandoah County, JER, July 20, 1976. The 2 specimens collected by WAA are dark forms (Pechuman 1973) and may represent a new species.

Tabanus turbidus Wiedemann. Greene County, Tennessee, BCK, August 18, 1976.

3/ Collected in a 15-watt fluorescent blacklight trap.

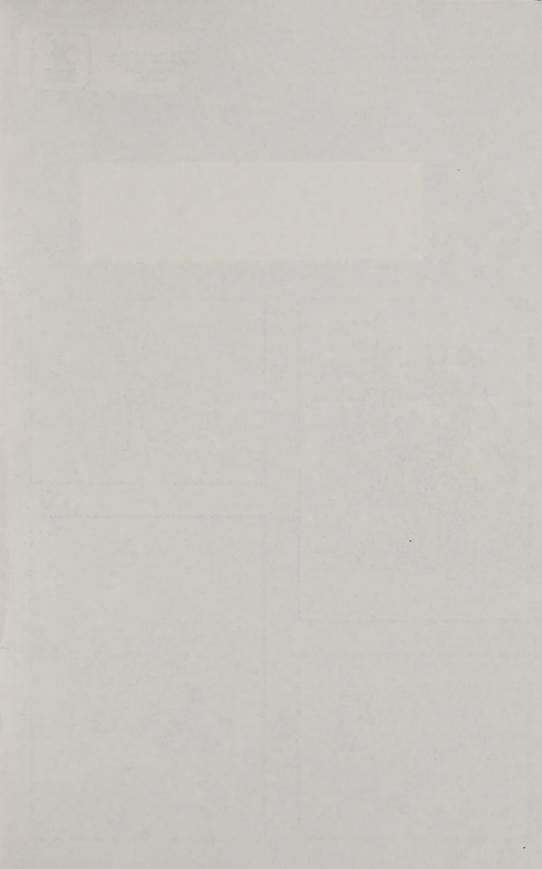
Abbreviations for collectors listed 3 times or more

BCK, B.C. Kondratieff; JER, J.E. Roberts, Sr.; SWB, S.W. Bullington; WAA, W.A. Allen.

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